Mr. K. Beaumont,
Assistant Registrar.

LEEDS
UNIVERSITY
ARCHIVES

# CALENDAR, 1964-65

CALENDAR, 1964-65

UNIVERSITY OF LEEDS

# CALENDAR

*1964-65*

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# ALMANAC

## SESSION 1964-65

| | |
|---|---|
| 1ST TERM | Tuesday, 6 October |
| | Friday, 18 December |
| 2ND TERM | Thursday, 14 January |
| | Wednesday, 24 March |
| 3RD TERM | Thursday, 22 April |
| | Wednesday, 30 June |

## SESSION 1965-66

| | |
|---|---|
| 1ST TERM | Thursday, 7 October |
| | Friday, 17 December |
| 2ND TERM | Thursday, 13 January |
| | Wednesday, 23 March |
| 3RD TERM | Thursday, 21 April |
| | Wednesday, 29 June |

# OCTOBER 1964

| | | | |
|---|---|---|---|
| 1 | Th. | | |
| 2 | F. | | |
| 3 | S. | | |
| *4* | *S.* | | |
| 5 | M. | | |
| 6 | Tu. | FIRST TERM BEGINS | |
| 7 | W. | Senate, 2 p.m. | |
| 8 | Th. | Standing Committee on Courses and Schemes of Study for the Degree of B.Sc., 2.15 p.m.<br>M.Sc. Committee, 4 p.m.<br>Masterships Committee, 4.5 p.m. | |
| 9 | F. | | |
| 10 | S. | | |
| *11* | *S.* | | |
| 12 | M. | Ph.D. Committee, 4.15 p.m. | *Public Lecture* |
| 13 | Tu. | Board of the Faculties of Arts, Economic and Social Studies and Law, 5 p.m. | |
| 14 | W. | Finance Committee, 2.15 p.m. | |
| 15 | Th. | Board of the Faculties of Science and Technology, 5 p.m. | *University Lecture*<br>*Public Lecture* |
| 16 | F. | Library Committee, 4 p.m. | |
| 17 | S. | | |
| *18* | *S.* | | |
| 19 | M. | | *Inaugural Lecture* |
| 20 | Tu. | Brotherton Collection Committee, 2.15 p.m.<br>Board of the Faculty of Medicine, 5.15 p.m. | *Institute of Education*<br>*Annual Service* |
| 21 | W. | Council, 2.15 p.m. | *Chamber Music Concert* |
| 22 | Th. | | *Midday Recital*<br>*Medical Inaugural Lecture*<br>*Public Lecture* |
| 23 | F. | | |
| 24 | S. | Academic Advisory Committee, 9.30 a.m. | |
| *25* | *S.* | | *University Sermon* |
| 26 | M. | | *Art Lecture* |
| 27 | Tu. | | *Midday Recital* |
| 28 | W. | Senate Business Committee, 2 p.m. | *Music Lecture* |
| 29 | Th. | | *Public Lecture* |
| 30 | F. | | |
| 31 | S. | | |

# NOVEMBER 1964

| | | | |
|---|---|---|---|
| *1* | *S.* | | |
| 2 | M. | | *Inaugural Lecture* |
| 3 | Tu. | Medical Library Sub-Committee, 5 p.m. | |
| 4 | W. | Senate, 2 p.m. | |
| 5 | Th. | Standing Committee on Courses and Schemes of Study for the Degree of B.Sc., 2.15 p.m.<br>Institute of Education Executive Committee, 2.30 p.m.<br>Masterships Committee, 4.5 p.m. | *Midday Recital*<br>*Public Lecture* |
| 6 | F. | | |
| 7 | S. | | |
| *8* | *S.* | | |
| 9 | M. | House and Estates Committee, 2.15 p.m.<br>Ph.D. Committee, 4.15 p.m. | *Public Lecture* |
| 10 | Tu. | Board of the Faculties of Arts, Economic and Social Studies and Law, 5 p.m. | |
| 11 | W. | Finance Committee, 2.15 p.m.<br>Academic Advisory Committee, 3.45 p.m. | |
| 12 | Th. | M.Sc. Committee, 4 p.m. | *Public Lecture* |
| 13 | F. | Library Committee, 4 p.m. | |
| 14 | S. | | |
| *15* | *S.* | | |
| 16 | M. | | *Science Lecture* |
| 17 | Tu. | Board of the Faculty of Medicine, 5.15 p.m. | |
| 18 | W. | Council, 3 p.m.<br>Court, 4.15 p.m. | |
| 19 | Th. | Board of the Faculties of Science and Technology, 5 p.m. | *Midday Recital* |
| 20 | F. | | |
| 21 | S. | | |
| *22* | *S.* | | |
| 23 | M. | Board of Extra-Mural Studies, 2.30 p.m. | *Inaugural Lecture* |
| 24 | Tu. | Textile Industries and Dyeing Advisory Committee, 2.30 p.m. | |
| 25 | W. | Senate Business Committee, 2 p.m. | *Chamber Music Concert* |
| 26 | Th. | | *Midday Recital* |
| 27 | F. | | |
| 28 | S. | | |
| *29* | *S.* | | |
| 30 | M. | | *Art Lecture* |

# DECEMBER 1964

| | | | |
|---|---|---|---|
| 1 | Tu. | | |
| 2 | W. | Senate, 2 p.m. | |
| 3 | Th. | Standing Committee on Courses and Schemes of Study for the Degree of B.Sc., 2.15 p.m.<br>Board of the Institute of Education, 2.30 p.m.<br>Masterships Committee, 4.5 p.m. | |
| 4 | F. | | *University Lecture* |
| 5 | S. | | |
| 6 | *S.* | | |
| 7 | M. | | *Inaugural Lecture* |
| 8 | Tu. | Board of the Faculties of Arts, Economic and Social Studies and Law, 5 p.m. | |
| 9 | W. | Finance Committee, 2.15 p.m.<br>Academic Advisory Committee, 3.45 p.m. | *Music Society Concert* |
| 10 | Th. | M.Sc. Committee, 4 p.m. | |
| 11 | F. | | |
| 12 | S. | | |
| 13 | *S.* | | |
| 14 | M. | House and Estates Committee, 2.15 p.m.<br>Ph.D. Committee, 4.15 p.m. | *Carol Singing* |
| 15 | Tu. | Union Building Advisory Committee, 2.30 p.m.<br>Board of the Faculty of Medicine, 5.15 p.m. | |
| 16 | W. | Council, 2.15 p.m. | |
| 17 | Th. | Board of the Faculties of Science and Technology, 5 p.m. | |
| 18 | F. | FIRST TERM ENDS | |
| 19 | S. | | |
| 20 | *S.* | | |
| 21 | M. | | |
| 22 | Tu. | Degree Congregation | |
| 23 | W. | | |
| 24 | Th. | University buildings closed | |
| 25 | F. | Christmas Day | |
| 26 | S. | University buildings closed | |
| 27 | *S.* | | |
| 28 | M. | University buildings closed | |
| 29 | Tu. | Brotherton Library closed | |
| 30 | W. | Brotherton Library closed | |
| 31 | Th. | | |

# JANUARY 1965

| | | |
|---|---|---|
| 1 | F. | |
| 2 | S. | |
| *3* | *S.* | |
| 4 | M. | |
| 5 | Tu. | |
| 6 | W. | |
| 7 | Th. | |
| 8 | F. | |
| 9 | S. | |
| *10* | *S.* | |
| 11 | M. | |
| 12 | Tu. | |
| 13 | W. | |
| 14 | Th. | SECOND TERM BEGINS |
| 15 | F. | |
| 16 | S. | |
| *17* | *S.* | |
| 18 | M. | *University Lecture*<br>*Clive Behrens Lecture*<br>*Inaugural Lecture* |
| 19 | Tu. | |
| 20 | W. | *Chamber Music Concert* |
| 21 | Th. | |
| 22 | F. | |
| 23 | S. | |
| *24* | *S.* | |
| 25 | M. | *University Lecture*<br>*Clive Behrens Lecture* |
| 26 | Tu. | *Midday Recital* |
| 27 | W. | Senate Business Committee, 2 p.m. |
| 28 | Th. | |
| 29 | F. | |
| 30 | S. | |
| *31* | *S.* | *University Sermon* |

# FEBRUARY 1965

| | | | |
|---|---|---|---|
| 1 | M. | | *Art Lecture* |
| 2 | Tu. | Medical Library Sub-Committee, 5 p.m. | |
| 3 | W. | Senate, 2 p.m. | |
| 4 | Th. | Standing Committee on Courses and Schemes of Study for the Degree of B.Sc., 2.15 p.m.<br>Masterships Committee, 4.5 p.m. | |
| 5 | F. | | |
| 6 | S. | | |
| *7* | *S.* | | |
| 8 | M. | House and Estates Committee, 2.15 p.m.<br>Ph.D. Committee, 4.15 p.m. | *Clive Behrens Lecture*<br>*Inaugural Lecture* |
| 9 | Tu. | Board of the Faculties of Arts, Economic and Social Studies and Law, 5 p.m. | |
| 10 | W. | Finance Committee, 2.15 p.m. | |
| 11 | Th. | M.Sc. Committee, 4 p.m. | *Midday Recital* |
| 12 | F. | Library Committee, 4 p.m. | |
| 13 | S. | | |
| *14* | *S.* | | |
| 15 | M. | | *Clive Behrens Lecture* |
| 16 | Tu. | Board of the Faculty of Medicine, 5.15 p.m. | |
| 17 | W. | Council, 2.15 p.m. | |
| 18 | Th. | Board of the Faculties of Science and Technology, 5 p.m. | |
| 19 | F. | | |
| 20 | S. | | |
| *21* | *S.* | | |
| 22 | M. | Board of Extra-Mural Studies, 2.30 p.m. | *Inaugural Lecture* |
| 23 | Tu. | | |
| 24 | W. | Senate Business Committee, 2 p.m. | *Chamber Music Concert* |
| 25 | Th. | | |
| 26 | F. | | |
| 27 | S. | | |
| *28* | *S.* | | |

# MARCH 1965

| | | | |
|---|---|---|---|
| 1 | M. | | *Clive Behrens Lecture*<br>*Public Lecture* |
| 2 | Tu. | | |
| 3 | W. | Senate, 2 p.m. | |
| 4 | Th. | Standing Committee on Courses and Schemes of Study for the Degree of B.Sc., 2.15 p.m.<br>Institute of Education Executive Committee, 2.30 p.m.<br>Masterships Committee, 4.5 p.m. | |
| 5 | F. | | *Montague Burton Lecture* |
| 6 | S. | | |
| 7 | *S.* | | |
| 8 | M. | House and Estates Committee, 2.30 p.m.<br>Ph.D. Committee, 4.15 p.m. | *Science Lecture* |
| 9 | Tu. | Board of the Faculties of Arts, Economic and Social Studies and Law, 5 p.m. | |
| 10 | W. | Finance Committee, 2.15 p.m. | |
| 11 | Th. | M.Sc. Committee, 4 p.m. | |
| 12 | F. | | |
| 13 | S. | | |
| 14 | *S.* | | |
| 15 | M. | | *Science Lecture* |
| 16 | Tu. | Board of the Faculty of Medicine, 5.15 p.m. | |
| 17 | W. | Council, 2.15 p.m. | |
| 18 | Th. | Board of the Institute of Education, 2.30 p.m.<br>Board of the Faculties of Science and Technology, 5 p.m. | *Music Society Concert* |
| 19 | F. | | |
| 20 | S. | | |
| 21 | *S.* | | |
| 22 | M. | | |
| 23 | Tu. | Union Building Advisory Committee, 2.30 p.m. | |
| 24 | W. | SECOND TERM ENDS | |
| 25 | Th. | | |
| 26 | F. | | |
| 27 | S. | | |
| 28 | *S.* | | |
| 29 | M. | | |
| 30 | Tu. | | |
| 31 | W. | | |

# APRIL 1965

| | | |
|---|---|---|
| 1 | Th. | |
| 2 | F. | |
| 3 | S. | |
| 4 | *S.* | |
| 5 | M. | |
| 6 | Tu. | |
| 7 | W. | |
| 8 | Th. | |
| 9 | F. | |
| 10 | S. | |
| 11 | *S.* | |
| 12 | M. | |
| 13 | Tu. | |
| 14 | W. | |
| 15 | Th. | University buildings closed at 12.30 p.m. (except the Brotherton Library, the main entrance to the Parkinson building and the University Road entrance) |
| 16 | F. | Good Friday. University buildings closed |
| 17 | S. | University buildings closed |
| 18 | *S.* | Easter Day |
| 19 | M. | University buildings closed |
| 20 | Tu. | University buildings closed |
| 21 | W. | |
| 22 | Th. | THIRD TERM BEGINS |
| 23 | F. | |
| 24 | S. | |
| 25 | *S.* | |
| 26 | M. | *Inaugural Lecture* |
| 27 | Tu. | |
| 28 | W. | Senate Business Committee, 2 p.m. |
| 29 | Th. | |
| 30 | F. | Library Committee, 4 p.m. |

# MAY 1965

| | | |
|---|---|---|
| 1 | S. | |
| *2* | *S.* | *University Sermon* |
| 3 | M. | |
| 4 | Tu. | |
| 5 | W. | Senate, 2 p.m. *Chamber Music Concert* |
| 6 | Th. | Standing Committee on Courses and Schemes of Study for the Degree of B.Sc., 2.15 p.m.<br>Masterships Committee, 4.5 p.m. |
| 7 | F. | |
| 8 | S. | |
| *9* | *S.* | |
| 10 | M. | House and Estates Committee, 2.15 p.m.<br>Ph.D. Committee, 4.15 p.m. |
| 11 | Tu. | Board of the Faculties of Arts, Economic and Social Studies and Law, 5 p.m. |
| 12 | W. | Finance Committee, 2.15 p.m. |
| 13 | Th. | M.Sc. Committee, 4 p.m. |
| 14 | F. | |
| 15 | S. | |
| *16* | *S.* | |
| 17 | M. | *Selig Brodetsky Memorial Lecture* |
| 18 | Tu. | Board of the Faculty of Medicine, 5.15 p.m. |
| 19 | W. | Council, 2.15 p.m.<br>Court, 3.30 p.m. |
| 20 | Th. | Honorary Degrees Ceremony |
| 21 | F. | |
| 22 | S. | |
| *23* | *S.* | |
| 24 | M. | |
| 25 | Tu. | |
| 26 | W. | Senate Business Committee, 2 p.m. |
| 27 | Th. | Board of the Faculties of Science and Technology, 5 p.m. |
| 28 | F. | |
| 29 | S. | |
| *30* | *S.* | |
| 31 | M. | |

# JUNE 1965

| | | |
|---|---|---|
| 1 | Tu. | Medical Library Sub-Committee, 5 p.m. |
| 2 | W. | Senate, 2 p.m. |
| 3 | Th. | Standing Committee on Courses and Schemes of Study for the Degree of B.Sc., 2.15 p.m.<br>Institute of Education Executive Committee, 2.30 p.m. |
| 4 | F. | |
| 5 | S. | |
| 6 | *S.* | |
| 7 | M. | University buildings closed |
| 8 | Tu. | University buildings closed |
| 9 | W. | Finance Committee, 2.15 p.m. |
| 10 | Th. | M.Sc. Committee, 4 p.m.<br>Masterships Committee, 4.5 p.m. |
| 11 | F. | Library Committee, 4 p.m. |
| 12 | S. | |
| 13 | *S.* | |
| 14 | M. | Ph.D. Committee, 4.15 p.m. |
| 15 | Tu. | Board of the Faculties of Arts, Economic and Social Studies and Law, 5 p.m. |
| 16 | W. | Council, 2.15 p.m. |
| 17 | Th. | Board of the Faculties of Science and Technology, 5 p.m. |
| 18 | F. | Last day for return of books to the Brotherton, agricultural, law and textile libraries for annual inspection, 5 p.m. |
| 19 | S. | |
| 20 | *S.* | |
| 21 | M. | Board of Extra-Mural Studies, 2.30 p.m. |
| 22 | Tu. | Board of the Faculty of Medicine, 5.15 p.m. |
| 23 | W. | |
| 24 | Th. | |
| 25 | F. | |
| 26 | S. | |
| 27 | *S.* | |
| 28 | M. | |
| 29 | Tu. | Board of the Institute of Education, 2.30 p.m.<br>Union Building Advisory Committee, 2.30 p.m. |
| 30 | W. | THIRD TERM ENDS<br>Senate Business Committee, 2 p.m. |

# JULY 1965

| | | |
|---|---|---|
| 1 | Th. | |
| 2 | F. | |
| 3 | S. | |
| *4* | *S.* | |
| 5 | M. | |
| 6 | Tu. | |
| 7 | W. | Senate, 2 p.m. |
| 8 | Th. | |
| 9 | F. | |
| 10 | S. | |
| *11* | *S.* | |
| 12 | M. | House and Estates Committee, 2.15 p.m. |
| 13 | Tu. | |
| 14 | W. | Finance Committee, 2.15 p.m. |
| 15 | Th. | |
| 16 | F. | |
| 17 | S. | |
| *18* | *S.* | |
| 19 | M. | |
| 20 | Tu. | |
| 21 | W. | Council, 2.15 p.m. |
| 22 | Th. | |
| 23 | F. | |
| 24 | S. | |
| *25* | *S.* | |
| 26 | M. | |
| 27 | Tu. | |
| 28 | W. | |
| 29 | Th. | |
| 30 | F. | |
| 31 | S. | University buildings closed |

# AUGUST 1965

1 *S.*
2 M.
3 Tu.
4 W.
5 Th.
6 F.
7 S.
*8* *S.*
9 M.
10 Tu.
11 W.
12 Th.
13 F.
14 S.
*15* *S.*
16 M.
17 Tu.
18 W.
19 Th.
20 F.
21 S.
*22* *S.*
23 M.
24 Tu.
25 W.
26 Th.
27 F.
28 S.
*29* *S.*
30 M. University buildings closed
31 Tu. University buildings closed

# SEPTEMBER 1965

1 W.
2 Th.
3 F.
4 S.
5 *S.*
6 M.
7 Tu.
8 W.
9 Th.
10 F.
11 S.
*12* *S.*
13 M.
14 Tu.
15 W.
16 Th.
17 F.
18 S.
*19* *S.*
20 M.
21 Tu.
22 W.
23 Th.
24 F.
25 S.
*26* *S.*
27 M.
28 Tu.
29 W. Senate Business Committee, 2 p.m.
30 Th.

# OCTOBER 1965

| | | |
|---|---|---|
| 1 | F. | |
| 2 | S. | |
| 3 | *S.* | |
| 4 | M. | |
| 5 | Tu. | |
| 6 | W. | Senate, 2 p.m. |
| 7 | Th. | FIRST TERM BEGINS<br>Standing Committee on Courses and Schemes of Study for the Degree of B.Sc., 2.15 p.m.<br>Masterships Committee, 4.5 p.m. |
| 8 | F. | |
| 9 | S. | |
| 10 | *S.* | |
| 11 | M. | House and Estates Committee, 2.15 p.m.<br>Ph.D. Committee, 4.15 p.m. |
| 12 | Tu. | Board of the Faculties of Arts, Economic and Social Studies and Law, 5 p.m. |
| 13 | W. | Finance Committee, 2.15 p.m. |
| 14 | Th. | M.Sc. Committee, 4 p.m. |
| 15 | F. | Library Committee, 4 p.m. |
| 16 | S. | |
| 17 | *S.* | |
| 18 | M. | |
| 19 | Tu. | Board of the Faculty of Medicine, 5.15 p.m. |
| 20 | W. | Council, 2.15 p.m. |
| 21 | Th. | Board of the Faculties of Science and Technology, 5 p.m. |
| 22 | F. | |
| 23 | S. | |
| 24 | *S.* | |
| 25 | M. | |
| 26 | Tu. | |
| 27 | W. | Senate Business Committee, 2 p.m. |
| 28 | Th. | |
| 29 | F. | |
| 30 | S. | |
| 31 | *S.* | |

# NOVEMBER 1965

| | | |
|---|---|---|
| 1 | M. | |
| 2 | Tu. | Medical Library Sub-Committee, 5 p.m. |
| 3 | W. | Senate, 2 p.m. |
| 4 | Th. | Standing Committee on Courses and Schemes of Study for the Degree of B.Sc., 2.15 p.m.<br>Masterships Committee, 4.5 p.m. |
| 5 | F. | |
| 6 | S. | |
| 7 | *S.* | |
| 8 | M. | House and Estates Committee, 2.15 p.m.<br>Ph.D. Committee, 4.15 p.m. |
| 9 | Tu. | Board of the Faculties of Arts, Economic and Social Studies and Law, 5 p.m. |
| 10 | W. | Finance Committee, 2.15 p.m. |
| 11 | Th. | M.Sc. Committee, 4 p.m.<br>Library Committee, 4 p.m. |
| 12 | F. | |
| 13 | S. | |
| *14* | *S.* | |
| 15 | M. | |
| 16 | Tu. | Board of the Faculty of Medicine, 5.15 p.m. |
| 17 | W. | Council, 2.15 p.m.<br>Court, 3.30 p.m. |
| 18 | Th. | Board of the Faculties of Science and Technology, 5 p.m. |
| 19 | F. | |
| 20 | S. | |
| *21* | *S.* | |
| 22 | M. | |
| 23 | Tu. | |
| 24 | W. | Senate Business Committee, 2 p.m. |
| 25 | Th. | |
| 26 | F. | |
| 27 | S. | |
| *28* | *S.* | |
| 29 | M. | |
| 30 | Tu. | |

# DECEMBER 1965

| | | |
|---|---|---|
| 1 | W. | Senate, 2 p.m. |
| 2 | Th. | Standing Committee on Courses and Schemes of Study for the Degree of B.Sc., 2.15 p.m |
| 3 | F. | |
| 4 | S. | |
| 5 | *S.* | |
| 6 | M. | House and Estates Committee, 2.15 p.m. |
| 7 | Tu. | |
| 8 | W. | Finance Committee, 2.15 p.m. |
| 9 | Th. | M.Sc. Committee, 4 p.m.<br>Masterships Committee, 4.5 p.m. |
| 10 | F. | |
| 11 | S. | |
| *12* | *S.* | |
| 13 | M. | Ph.D. Committee, 4.15 p.m. |
| 14 | Tu. | Union Building Advisory Committee, 2.30 p.m.<br>Board of the Faculties of Arts, Economic and Social Studies and Law, 5 p.m. |
| 15 | W. | Council, 2.15 p.m. |
| 16 | Th. | Board of the Faculties of Science and Technology, 5 p.m. |
| 17 | F. | FIRST TERM ENDS |
| 18 | S. | |
| *19* | *S.* | |
| 20 | M. | |
| 21 | Tu. | |
| 22 | W. | |
| 23 | Th. | |
| 24 | F. | University buildings closed |
| 25 | S. | Christmas Day |
| *26* | *S.* | |
| 27 | M. | University buildings closed |
| 28 | Tu. | University buildings closed |
| 29 | W. | Brotherton Library closed |
| 30 | Th. | Brotherton Library closed |
| 31 | F. | |

THE UNIVERSITY OF LEEDS

# THE CHARTER

EDWARD VII, by the Grace of God, of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the seas, King, Defender of the Faith. To all to whom these presents shall come, greeting.

Whereas by Charter of Her Late Majesty Queen Victoria, dated 20th April, 1880, the Victoria University was founded and constituted having its seat in the City of Manchester.

And whereas the Owens College, Manchester, was thereby constituted a college in the University and provision was made that other colleges might from time to time be admitted as colleges in the University in the manner and subject to the conditions therein prescribed.

And whereas the University College, Liverpool, was by resolution of the Court of the University admitted as a college of the University on the 5th November, 1884, and The Yorkshire College, Leeds, was by resolution of the said Court admitted as a college in the University on the 3rd November, 1887, but no other college has been so admitted.

And whereas the said University College, Liverpool, has presented to Us in Our Council a humble petition under the Common Seal of that college praying us to erect a university within the City of Liverpool.

And whereas the Owens College, Manchester, has presented to Us in Our Council a humble petition under the Common Seal of that college praying that a new or supplemental Charter may be granted so as to constitute and continue the Victoria University as a university in Manchester without association with any college except the Owens College.

And whereas the Yorkshire College, Leeds, has presented to Us in Our Council a humble petition under the Common Seal of that college, praying Us to erect a university having its seat in Leeds.

And whereas we have taken the said petitions into Our Royal consideration and are minded to accede thereto.

Now therefore know ye that We, by virtue of Our Royal Prerogative and all other powers in that behalf enabling us of Our Special Grace certain knowledge and mere motion by these presents do for Us, Our Heirs and Successors, grant, will, direct, and ordain as follows:

I.

There shall be from henceforth for ever in Our said City of Leeds a university of the name and style of 'The University of Leeds,' which shall be and continue one body politic and corporate with perpetual succession and a common seal and with full power and capacity, subject to the restrictions herein set forth, without any further licence to all persons and corporations to assure and to the University to take, by gift or otherwise purchase and hold and also to grant demise or otherwise dispose of real and personal property.

II.

The University shall have the powers following:

1. To grant and confer degrees and other academic distinctions to and on persons who shall have pursued an approved course of study in the University and shall have passed the examinations of the University under conditions laid down in its Statutes or Ordinances. Provided that degrees representing proficiency in technical subjects shall not be conferred without proper security for testing the scientific or general knowledge underlying technical attainments.

2. To admit graduates of other universities to degrees of equal or similar rank in the University.

3. To confer degrees of the University on any persons, who hold office in the University as professors, readers, lecturers, or otherwise, or who shall have carried on independent research therein, or on any persons who, at the date of this Our Charter, are Associates of the Yorkshire College.

4. To grant diplomas, licentiateships, certificates, or other distinctions to persons who have pursued a course of study approved by the University under conditions laid down by the University.

5. To confer Honorary degrees, or other distinctions on approved persons. Provided that all degrees and other distinctions shall be conferred and held subject to any provisions which may be made in reference thereto by the Statutes, Ordinances, or Regulations of the University.

6. To provide for instruction in such branches of learning as the University may think fit, and also to make provision for research and for the advancement and dissemination of knowledge.

7. To examine and inspect schools and other educational institutions, to grant diplomas and other certificates, and to provide such lectures and instruction for persons not members of the University as the University may determine.

8. To accept the examinations and periods of study passed by students of the University at other universities or places of learning as equivalent to such examinations and periods of study in the University as the University may determine, and to withdraw such acceptance at any time. Provided that in no case shall the University confer a degree in medicine or surgery upon any person who has not attended in the University during two years at least courses of study recognised for such degree, or for one of the other degrees in the University.

9. To affiliate other colleges or institutions or branches or departments thereof, or to admit the members thereof to any of the privileges of the University, and to accept attendance at courses of study in such colleges or institutions in place of the attendance at courses of study in the University, and upon such terms and conditions and subject to such regulations as may from time to time be determined by the University.

10. To co-operate by means of joint boards or otherwise, with other universities and authorities for the conduct of matriculation examina-

tions, for the examination and inspection of schools and other academic institutions and for such other purposes as the University may from time to time determine.

11. To enter into any agreement with the Yorkshire College for the incorporation of that college in the University, and for taking over its property and liabilities, and, if necessary, to promote a Bill in Parliament to confirm or carry out any such agreement.

12. To enter into any agreement with any other institution for the incorporation of that institution in the University and for taking over its property and liabilities, and for any other purpose not repugnant to this Our Charter.

13. To enter into any agreement with the Victoria University of Manchester or with the University of Liverpool for the division or apportionment of any of the moneys, endowments, or property of the Victoria University, with due regard to the local origin of any particular foundation, to the wishes of the donors, and other special circumstances, and for reference to an arbitrator in case of difference.

14. To institute professorships, assistant professorships, readerships, lectureships, teacherships, and any other offices required by the University and to appoint to such offices. Also to institute and award fellowships, scholarships and exhibitions and prizes.

15. To license halls for the residence of students.

16. To do all such other acts and things whether incidental to the powers aforesaid or not, as may be requisite in order to further the objects of the University as a teaching and examining body, and to cultivate and promote arts, science and learning.

III.

It shall be the duty of the University to co-operate, by means of a joint board or otherwise, with the Victoria University of Manchester and the University of Liverpool for the regulation and conduct of matriculation examinations, including the conditions of exemption therefrom. Statutes of the University shall prescribe and regulate the constitution and duties of the said joint board, the appointment and continuance in office of the members thereof, the filling of vacancies among the members, and all other matters relative to the joint board which it may be thought are proper to be so regulated and prescribed.

## IV. VISITOR

We, Our Heirs and Successors, Kings and Queens of the Kingdom and Dominions aforesaid, shall be and remain the Visitor and Visitors of the University through the Lord President of our Council for the time being, and in the exercise of the Visitorial Authority We and Our Heirs and Successors shall have the right from time to time and in such manner as We or They shall think fit to direct an inspection of the University, its buildings, laboratories, and general equipment, and also of the examination, teaching, and other work done by the University.

## V. AUTHORITIES OF THE UNIVERSITY

The authorities of the University shall be the Chancellor, the Pro-Chancellor, the Vice-Chancellor, the Pro-Vice-Chancellor, the Court, the Council, the Senate, the Faculties, the Boards of Faculties, and the Convocation. There shall be a Treasurer and other proper officers of the University.

## VI. THE CHANCELLOR

The Chancellor shall be the head and chief Officer of the University and president of its Court, Council, and Convocation, and shall, except as otherwise hereby provided, confer degrees. He shall hold office during his life or until his resignation or until his removal for good cause by the Visitor at the instance of the Court.

Our right trusty and entirely beloved Cousin and Councillor, George Frederick Samuel, Marquess of Ripon, Knight of Our Most Noble Order of the Garter, Doctor of Laws, shall be the first Chancellor of the University.

His successors from time to time shall be elected by the Court on the nomination of the Council of the University.

## VII. THE PRO-CHANCELLOR

In the absence of the Chancellor, or pending a vacancy in the office of Chancellor, or during the Chancellor's inability to act, the Pro-Chancellor shall exercise all the functions of the Chancellor, except the conferring of degrees, and shall, if present, preside at any meetings of the Court and Council.

Our trusty and well-beloved Arthur Greenhow Lupton, chairman of the Council of the Yorkshire College, shall be the first Pro-Chancellor of the University, and shall hold his office for one year. Subsequent appointments to the said office shall be made annually by the Court on the nomination of the Council.

## VIII. THE VICE-CHANCELLOR

The Vice-Chancellor shall be *ex officio* chairman of the Senate. In the absence of the Chancellor the Vice-Chancellor shall confer degrees, except as otherwise hereby provided.

Our trusty and well-beloved Nathan Bodington, Principal of the Yorkshire College, Doctor of Letters, shall be the first Vice-Chancellor of the University, and shall hold such office for such term or terms and subject to such conditions as may from time to time be determined by the Council.

His successors from time to time shall be appointed by the Court on the nomination of the Council and shall hold such office for such term or terms and subject to such conditions as may from time to time be determined by the Council.

## IX. THE PRO-VICE-CHANCELLOR

Subject to the Statutes and Ordinances of the University, and in the absence of the Vice-Chancellor, the Pro-Vice-Chancellor may act as Vice-Chancellor.

The Pro-Vice-Chancellor shall from time to time be appointed by the Council from among the members of the Senate.

## X. THE COURT

The Court shall be the governing body of the University and shall direct the form, custody, and use of the common seal, and shall have power to regulate and determine all matters concerning the University, and generally shall exercise all the powers and discretions of the University, except as otherwise provided by this Our Charter or by the Statutes.

The Court shall have power by Statute to increase or diminish the number of its members, by increasing or diminishing the number to be nominated or appointed by the persons or bodies possessing the right of nomination or appointment, or by adding representatives of other bodies, or in any other manner.

The Statutes set forth in the schedule hereto annexed shall be the first Statutes of the University under this Our Charter. The Court may amend, add to, or repeal the Statutes for the time being in force [including those set forth in the schedule hereto], but no such amendment, addition, or repeal shall be valid or operative until allowed by Us or by a committee of Our Council.

Ordinances may be made by the Court for the regulation of all matters not required by this Our Charter to be dealt with by Statute.

Provided 1. that it shall not be lawful for the Court, by any Statute or otherwise, to adopt or impose on any person any test whatever of religious belief or profession in order to entitle him to be admitted as a professor, teacher, student, or member of the University, or to hold office therein, or to graduate thereat, or to enjoy or exercise any privilege thereof.

Provided 2. that any Statute or Ordinance made by the Court be not repugnant to the laws of this Realm or to the general objects of this Our Charter.

Provided 3. that Statutes or Ordinances relating to degrees, studies, and examinations shall not be adopted without report from the Senate.

Provided 4. that no change shall be made in any Statute or Ordinance altering the status, powers, or constitution of any of the authorities of the University until such authority shall have had an opportunity of pronouncing an opinion upon the proposed change.

The Court shall have power to confer degrees *in absentia* by a resolution of the Court, but save as aforesaid all degrees shall be conferred by the Chancellor or in his absence by the Vice-Chancellor or Pro-Vice-Chancellor.

The Court shall have power to deprive any graduate of the University who shall have been convicted of a crime or offence, or shall, in the opinion of the Court, have been guilty of scandalous conduct, of any degree or degrees conferred by the University and of all privileges enjoyed by him as such graduate aforesaid.

The acts of the Court shall not be invalidated by any vacancy among its members.

XI.

Every Statute or alteration of a Statute, and every Ordinance or alteration of an Ordinance relating to any of the matters following, that is to say:

1. The titles of degrees,
2. The establishment of new degrees,
3. The periods of residence and study in the University or in any affiliated or recognised institution required for degrees,
4. The conditions under which degrees higher than the degree of Bachelor in any Faculty are to be granted.
5. The courses for medical degrees and the subjects of examinations,

shall before such Statute or alteration of a Statute shall be allowed and before such Ordinance or alteration of an Ordinance shall become operative and have effect be communicated to the Victoria University of Manchester and the University of Liverpool, and if within one month after the receipt of such communication notice of objection thereto shall have been given by the said universities or either of them the question so arising shall be considered by a joint committee of the three universities, and in default of agreement any of the said universities may within one month make a representation in regard thereto to Us or to a committee of Our Council, and, in the event last mentioned, such Statute or Ordinance or alteration therein shall not become operative and have effect until allowed by us or by such committee.

Statutes of the University shall prescribe and regulate the constitution and appointment of the said joint committee and all other matters relating to the said committee which it may be thought are proper to be so prescribed and regulated.

XII. THE COUNCIL

The Council shall be the executive body of the University and may exercise and do such of the powers, authorities, and things by this Our Charter granted to or authorised to be done by the Court, as are, or shall from time to time be assigned to the Council by Statute or by the Court, except the election of members of the Court to be members of the Council.

The Court shall have power by Statute to increase or diminish the number of the Council, by increasing or diminishing the number to be nominated, elected, or appointed by the persons or bodies possessing the right of nomination or appointment, or by adding representatives of other bodies, or in any other manner.

The Council shall have power to draft Statutes and Ordinances as and when they see fit, and to submit the same to the Court for consideration and enactment.

The acts of the Council shall not be invalidated by reason of any vacancy among its members.

XIII. THE SENATE

The constitution of the Senate shall be determined by Statute.

The Senate shall, subject to the Statutes and Ordinances of the University, and subject also to review by the Court, have the control and general regulation

of the instruction and education within the University and shall have power to discuss and pronounce an opinion on any matter whatsoever relating to the University and such other powers and duties as may be conferred upon it by Statute or Ordinance.

## XIV. THE FACULTIES

The University shall include the Faculties of Arts, Science, Medicine and Technology, and such other Faculties [whether formed by the sub-division of an existing Faculty or by the creation of a new Faculty or otherwise] as may from time to time be constituted by Statute.

The constitution and powers of the several Faculties shall be determined by Statute.

Such Boards of Faculties shall be appointed by the Council as the Council may from time to time determine; the members of each Board [the numbers of whom shall be in the discretion of the Council] shall be appointed by the Council from among members of one or more Faculties, or from among the external examiners of the University.

## XV. CONVOCATION

The Convocation shall consist of the Chancellor, the Vice-Chancellor, the Pro-Vice-Chancellor, the members of the Senate, the lecturers, and the registered graduates of the University.

The Court shall have power to fix the conditions of registration and to prescribe the annual or other fees, or a composition therefor which shall be necessary for registration.

The Chancellor, if present, shall preside at the meetings of Convocation.

## XVI. POWERS OF CONVOCATION

Convocation shall have the following powers:

To elect its own chairman, who shall, in the absence of the Chancellor, preside at its meetings.

To elect representatives as members of the Court and Council.

To discuss and pronounce an opinion on any matter whatsoever relating to the University, including any matters referred to them by the Court or the Council.

To prescribe the mode of conducting the proceedings of Convocation and of registering the same, and of reporting the same to the Court, Council, or Senate, or any of them.

To enter into communication directly with the Court, Council, or Senate on any matter affecting the University.

## XVII. REGULATIONS AS TO PROCEDURE

The Court, the Council, the Senate, the Faculties, the Boards of Faculties and Convocation respectively may from time to time make regulations for governing their respective proceedings, subject to this Our Charter and to the Statutes and Ordinances of the University.

## XVIII. THE TREASURER

Our trusty and well-beloved Sir John Barran, Baronet, Treasurer of the Yorkshire College, shall be the first Treasurer of the University, and shall hold his office for one year. Subsequent appointments to the said office shall be made annually by the Court.

## XIX. MEMBERS OF THE UNIVERSITY

The members of the University shall be the Chancellor, the Pro-Chancellor the Vice-Chancellor, the Pro-Vice-Chancellor, the Treasurer, the members of the University Court, the professors, emeritus professors, assistant professors, readers, lecturers and demonstrators, and such other teachers of the University as the Court may determine, the members of the Faculties, the holders of such other University offices as the Council may from time to time determine, the wardens or other chief officers of halls of residence licensed by the University, fellows, graduates, and undergraduates of the University.

The undergraduates of the University shall be such persons attending lectures, or receiving instruction in the University as shall have matriculated under the Statutes.

## XX. ADVISORY COMMITTEES

The Council may from time to time appoint advisory committees, consisting of members of the University and also, if the Council shall think fit, of persons who are not members of the University, and may delegate to such committees such duties as it thinks fit as regards financial, administrative, or other matters affecting the University or any particular Faculty or department, or the management or supervision of any buildings or property of the University.

## XXI. EXAMINERS AND EXAMINATIONS

All examinations held by the University shall be conducted in such manner as the Statutes and Ordinances shall prescribe, provided that at least one external and independent examiner shall be appointed by the Council for each subject or group of subjects forming part of the course of studies required for University degrees, but this proviso shall not apply to examinations for admission or entrance to the University. Provided that in case of a vacancy occurring in or during any examination or of other emergency the Vice-Chancellor shall have power to appoint a substitute for that examination.

## XXII. GENERAL PROVISIONS

All the degrees and courses of study of the University shall be open to women, subject to such conditions and regulations as the Court may prescribe, and women shall be eligible for any office in the University and for membership of any of its constituent bodies, and in the present Charter words implying the male sex shall be held to include the female, unless the context clearly shows the meaning to be otherwise.

XXIII.

The University may from time to time found and endow fellowships, scholarships, exhibitions, and other prizes for which funds or property may, by bequest, donation, grant, or otherwise be provided, and may make regulations respecting the same and the tenure thereof, but, except as aforesaid, and except by way of prize, reward, special grant, or remuneration for services rendered or to be rendered, in the past, present, or future respectively, the University shall not make any gift, division or bonus in money unto or between any of its members.

XXIV.

In addition to the buildings, lands, and premises of the University for the time being used and occupied for the immediate purposes thereof, the University shall have power to hold lands, tenements, and hereditaments of an annual value not exceeding in the aggregate, at the time or respective times of the acquisition of the same, the sum of £50,000.

XXV.

The University may demand and receive such fees as the Court may from time to time appoint.

XXVI.

The Court may from time to time alter, amend, or add to these presents by a special resolution in that behalf, and such alteration, amendment or addition shall, when allowed by Us, our Heirs, or Successors, or by any committee of our Most Honourable Privy Council, or otherwise as We or They shall think fit, become effectual so that these presents shall thenceforward continue and operate as though they had been originally granted and made as so altered, amended, or added to. This article shall apply to this Charter as altered, amended, or added to in any manner aforesaid.

XXVII.

A special resolution is a resolution passed at one meeting of the Court and confirmed at a subsequent meeting, held not less than one calendar month, nor more than three calendar months after the former, provided that the resolution be passed at each meeting by a majority of not less than three-fourths of the members of the Court present and voting thereon.

XXVIII.

In this Our Charter 'Statutes' means the Statutes set forth in the schedule hereto and any Statutes altering, amending, adding to, or repealing the same or any of them which may hereafter be made and may be allowed by Us in Council, or by a committee of Our Council.

'Ordinances' means acts of the Court under the powers conferred by this Our Charter to which Our further sanction is not hereby or by Statute required.

'Regulations,' except when otherwise required by the context, means Regulations made pursuant to this Our Charter or the Statutes.

## XXIX.

Our Royal Will and pleasure is that this Our Charter shall always be construed and adjudged in the most favourable and beneficial sense for the best advantage of the University, and the promotion of the objects of this Our Charter as well in all our Courts as elsewhere notwithstanding any non-recital, mis-recital, uncertainty or imperfection herein.

## THE SCHEDULE

# STATUTES

## 1. THE UNIVERSITY COURT

A. The University Court [hereinafter called the Court] shall consist of the following persons:

1. *Ex officio* members, The Chancellor, the Pro-Chancellor, the Vice-Chancellor, and the Treasurer.

2. All present members of the Council of the Yorkshire College; all present and future members of the University Council, during their tenure of office; all present perpetual and life governors of the College; and each present member of the Court who is a member either as a donor of £1,000 to the University or as the nominee of a company, society, or partnership firm which has made a donation of £1,000 to the University.

Six representatives of the Clothworkers' Company of London; one representative of the Skinners' Company of London; one representative of the Drapers' Company of London; one representative of the Trustees of William Akroyd's Foundation; one representative of the West Yorkshire Coal Owners' Association; one representative of the Yorkshire Board of Legal Studies; one representative of the Dyers' Company of London.

3. Representatives of public authorities:

Six from the County Council of the West Riding of Yorkshire
Two from the County Council of the North Riding of Yorkshire
Two from the County Council of the East Riding of Yorkshire
Four from the Council of the County Borough of Leeds
Two from the Council of the County Borough of Bradford
One from the Council of the County Borough of York
One from the Council of the County Borough of Hull
One from the Council of the County Borough of Halifax
One from the Council of the County Borough of Huddersfield
One from the Council of the County Borough of Middlesbrough
One from the Council of the County Borough of Barnsley
One from the Council of the County Borough of Dewsbury
One from the Council of the County Borough of Wakefield
One from the council of each of such other county boroughs to be created in future as may be approved by the Court.

4. Representatives of the University:

Ten from the Faculties
Representatives [not exceeding five in all] of the Convocation: one representative for every hundred members up to 500.

5. Representatives of other institutions:

Representatives of such affiliated institutions as the Court may determine, and
One representative of the Victoria University of Manchester
One representative of the University of Liverpool

One representative of such other English university as the Court may determine

One representative appointed by the governing body of each training college admitted as a member institution of the University of Leeds Institute of Education.

6. Representatives of schools:

Eight representatives of the head masters and mistresses of secondary schools in Yorkshire, such representatives to be appointed by the Court.

7. Other governors:

Three persons appointed by the Crown

Not less than ten nor more than twenty persons elected by co-optation by the Court.

Except as otherwise by the Charter provided, and subject to the Statutes of the University, the Court may determine all matters relating to the nomination, appointment, and election of members of the Court and Council, and their respective periods or terms of office, and all other matters relating to the constitution of the Court and Council.

B. The Court shall have power to delegate its functions to the Council except as otherwise provided, and to delegate to the Senate the power to award degrees other than *ad eundem* degrees, degrees conferred on persons who hold office in the University, and Honorary degrees.

The periods during which members of the Court respectively shall hold office shall be as follows:

The Chancellor, the Pro-Chancellor, the Vice-Chancellor, the Treasurer, and all future members of the University Council shall hold office during the time they occupy the positions named respectively.

All present members of the Council of the Yorkshire College and all present perpetual and life governors of the Yorkshire College and each present member of the Court who is a member either as a donor of £1,000 to the University or as the nominee of a company, society, or partnership firm which has made a donation of £1,000 to the University shall hold office for their respective lives or until resignation.

All other members mentioned in clause A2 above, and all members mentioned in clause A3 above, shall hold office for one year from the date of appointment. Of the members mentioned in clause A4, the ten representatives of the Faculties shall hold office for two years from the respective dates of appointment, and five of such members, to be selected by lot or otherwise as the Court shall determine, shall retire in each year; provided that if a representative of a Faculty ceases to be a member of that Faculty he shall cease to be a member of the Court. The representatives of Convocation shall hold office for two years from the date of appointment. Members mentioned in clause A5 and 6, shall hold office for two years from the respective dates of appointment. Members mentioned in clause A7 shall hold office for five years from the respective dates of appointment, but of the members appointed by co-optation two, to be selected by lot or otherwise as the Court shall determine, shall retire each year.

All retiring members shall be eligible for re-appointment or re-election.

Appointees or representatives need not be members of the bodies appointing.

Any member of the Court may resign such membership at any time by letter addressed to the Registrar of the University.

Any casual vacancy occurring by resignation, incapacity, or death among the appointed or representative or co-opted members shall be filled up as soon as convenient by the person or body which appointed or co-opted the member whose place has become vacant. If such member was a member for a term of years the person appointed to supply his place shall be a member of the Court for the remainder of that term.

Fifteen members of the Court shall form a quorum, and, until the above-mentioned representative members have been appointed, the other members shall form the Court.

## II. THE UNIVERSITY COUNCIL

A. The University Council [hereinafter called the Council] shall consist of the following persons, namely:

The Chancellor, the Pro-Chancellor, the Vice-Chancellor, the Pro-Vice-Chancellor and the Treasurer
Two representatives of the West Riding County Council
One representative of the North Riding County Council
One representative of the East Riding County Council
Two representatives of the County Borough of Leeds
One representative of the County Borough of Bradford
One representative of the Council of the County Borough of York
One representative of the Council of the County Borough of Hull
One representative of the Council of the County Borough of Halifax
One representative of the Council of the County Borough of Huddersfield
One representative of the Council of the County Borough of Middlesbrough
One representative of the Council of the County Borough of Barnsley
One representative of the Council of the County Borough of Dewsbury
One representative of the Council of the County Borough of Wakefield
One from the council of each of such other Yorkshire county boroughs already existing or to be created in future as may be approved by the Court
Two representatives of the Clothworkers' Company of London
Four members of the Senate to be elected by the Senate
Two representatives to be elected from among their number by the members of the Faculties who are not members of the Senate
Two members to be elected by Convocation
One member to be nominated by the Crown
Twelve members to be elected by the Court. Provided nevertheless, that at first such of the present members of the Council of the Yorkshire College as have been elected thereto by the board of governors of the College shall take the place of the said twelve members; and of such members of the Council of the Yorkshire College four, to be selected

by lot or otherwise as the Council may determine, shall retire every three years until the number of such members has been reduced to twelve or less; and on the number of such members being reduced to less than twelve the Court shall have power to appoint any other person or persons to make up such number to twelve. Provided also that, as from the 1st May, 1920, the number of members to be elected by the Court shall be increased from twelve to sixteen. Provided also that a person of the age of 71 years or over shall not be eligible for election or re-election by the Court as a member of the Council unless he was a member on the 21st April, 1920. So soon as the number of such members shall have been reduced to twelve or less, the members of the Council of the Yorkshire College who at that time remain members of the Council, together with such appointee or appointees of the Court as aforesaid, shall hold office for the period and be subject to the provisions as to retirement hereinafter mentioned, as if all such members and appointees as aforesaid had been elected members of the Council by the Court on the day when such number as aforesaid was reduced to twelve or less.

The members of the teaching staff who are members of the Council, however elected [including the Vice-Chancellor and the Pro-Vice-Chancellor], shall not exceed one fifth of the whole Council.

B. The periods during which the members of the Council respectively shall hold office shall be as follows:

The Chancellor, the Pro-Chancellor, the Vice-Chancellor, the Pro-Vice-Chancellor and the Treasurer shall hold office for the time during which they occupy the positions named respectively.

Representatives of the Senate, of the members of the Faculties who are not members of the Senate, and of Convocation, shall respectively hold office for two years provided that of the first representatives to be appointed by each of these bodies one half thereof shall be appointed for one year only.

All other members of the Council shall hold office for one year from the date of appointment, except as otherwise hereinbefore provided and except members elected by the Court who shall hold office for three years [four, to be selected by lot or otherwise as the Council shall determine, retiring each year], and except the person appointed by the Crown, who shall hold office for five years. Provided that the term of office of members newly elected by the Court in or after the year 1920 [other than those appointed to fill casual vacancies] shall be four years, and that the term of office of retiring members re-elected by the Court after the year 1920 shall also be four years.

Subject to the proviso contained in the foregoing sub-section A as to an age limit for the election or re-election of members by the Court, all retiring members shall be eligible for re-appointment or re-election.

Except as hereinbefore provided appointees or representatives need not be members of the bodies appointing.

Any member of the Council may resign such membership at any time by letter addressed to the Registrar of the University.

Any casual vacancy occurring by resignation, incapacity, or death among the appointed or representative members shall be filled up as soon as convenient by the person or body which appointed the member whose place has become vacant. If such member was a member for a term of years the person appointed to supply his place shall be a member of the Council for the remainder of that term.

Seven members of the Council shall form a quorum, and until the above named representative members have been elected, the other members shall form the Council.

## III. POWERS OF THE COUNCIL

Subject to the provisions made in the Charter and Statutes, the Council shall have the following powers:

To nominate the Pro-Chancellor and the Vice-Chancellor.

To elect professors of the University, and either to elect or to delegate to the Senate the election of any academic officers of the University other than professors.

To elect a Registrar and other officers of the University for such periods and under such conditions as may be determined by the Council.

To institute professorships, assistant professorships, readerships, lectureships, or other teaching offices, after giving the Senate the opportunity of reporting thereon.

To abolish or hold in abeyance, after giving the Senate the opportunity of reporting thereon, any professorship, readership, or other academic office in the University.

To draft Statutes and Ordinances as and when it sees fit and submit the same to the Court. Provided that any Statute or Ordinance relating to courses of study shall not be adopted without giving the Senate the opportunity of reporting thereon.

To make regulations for any purposes for which regulations are or may be authorised to be made.

To govern, manage, and regulate the finances, accounts, investments, property, business, and all affairs whatsoever of the University, and for that purpose to appoint bankers, deputy-treasurers, and any other officers or agents whom it may seem expedient to appoint.

To invest any moneys belonging to the University, including any unapplied income in such stocks, funds, fully paid shares or securities as the Council shall from time to time think fit, whether authorised by the general law for the investment of trust moneys or not, and whether within the United Kingdom of Great Britain and Ireland or not or in the purchase of freehold, copyhold, or leasehold hereditaments in the United Kingdom, including rent charges, or chief rents, with the like power of varying such investments from time to time by sale and re-investment or otherwise.

To sell, buy, exchange, lease, and accept leases of real and personal property on behalf of the University.

To provide the buildings, premises, furniture, and apparatus and other means needed for carrying on the work of the University.

To enter into, vary, carry out, and cancel contracts on behalf of the University. Any contract entered into on behalf of the University may be made in any manner authorised by law for the making of contracts by or on behalf of companies incorporated under the Companies' Acts, 1862 and 1867.

## IV. POWERS OF THE VICE-CHANCELLOR

The Vice-Chancellor shall have the sole power of suspending or dismissing any offending student subject to the right of appeal to the Visitor. He shall exercise general supervision over the educational arrangements of the University, regulate the admission of students, and maintain the discipline of the University, for which he shall be responsible to the Council.

## V. THE SENATE

The Senate of the University shall consist of the Vice-Chancellor, the professors of the University and the librarian, together with such additional members not exceeding eight in number as the Court may, after report from the Senate, appoint; provided that

1. additional members shall be members of the Boards of Faculties hereinafter mentioned and shall hold office for such term only as the Court may determine
2. the members of all the Faculties shall elect four persons each year to be nominated for appointment as additional members.

The professors of the University within the meaning of the Charter shall include those persons who shall be appointed by the Council as such, and also the professors of the Yorkshire College at the date of the Charter, who shall hold their professorships upon the same conditions as those upon which they held them at the date of the Charter, until such conditions shall be modified or altered by the Council.

The Senate shall have the following powers:

To make and submit to the Council, after report from the Board or Boards of Faculties concerned, all Regulations for giving effect to the Statutes and Ordinances of the University relating to courses of study.

To appoint internal examiners after report from the Board or Boards of Faculties concerned.

To recommend external examiners for appointment by the Council after report from the Board or Boards of Faculties concerned.

To report to the Council, after report from the Board or Boards of Faculties concerned, on all Ordinances relating to courses of study.

To report to the Council on Statutes or Ordinances or proposed changes of Statutes or Ordinances.

To report on any matter referred to or delegated to them by the Court or the Council.

To discuss and declare an opinion on any matter whatsoever relating to the University.

To appoint on delegation of the Council, readers, lecturers, and other academic officers of the University not being professors.

To formulate and modify or revise, subject to the control of the Council, schemes for the organisation of Faculties of arts, science, medicine, technology, and any other Faculties of the University, and to assign to such Faculties their respective subjects; also to report to the Council as to the expediency of the establishment at any time of other Faculties or as to the expediency of the abolition, combination, or sub-division of any Faculties.

To fix, subject to any conditions made by the founders which are accepted by the Court, the times and mode and conditions of competition for fellowships, scholarships, and other prizes, and to award the same.

To do such other acts and things as the Court shall authorise.

No new degree shall be established or other distinction of honour or merit adopted until the Senate has had an opportunity of reporting thereon.

## VI. FACULTIES

Each of the Faculties shall respectively consist of:

1. The professors assigned thereto by the Council.

2. Such lecturers, assistant lecturers, and other teachers of the University as may be appointed to the Faculty by the Council on the recommendation of the Senate, provided that all members of the full-time teaching staff who are appointed readers, senior lecturers, lecturers or assistant lecturers shall be assigned by the Council to membership of the appropriate Faculty at the time of their appointment; and provided also that after 30th September, 1949, no person with the exception of the Vice-Chancellor shall be eligible to be appointed or to continue to be a member of more than one Faculty.

3. Such other persons as may be appointed by the Council of the University on the recommendation of the Senate.

The members of all the Faculties shall elect four members each year to be nominated for appointment as additional members of the Senate.

Each Faculty shall have the power to elect to the Court of the University a representative or representatives or a representative jointly with such other Faculty or Faculties as the Council may from time to time decide, subject to the limitations hereinbefore defined.

Each Faculty shall have the power of presenting recommendations and reports to the Senate upon all matters connected with the subjects of study embraced by the Faculty.

As from the first day of August, 1933, the University shall include a Faculty of Law and a Faculty of Economics and Commerce; as from the first day of October, 1955, the Faculty of Economics and Commerce shall become the Faculty of Economic and Social Studies.

The Faculty of Technology shall, until otherwise provided by Statute, include agriculture, dyeing, engineering, leather industries, mining and textile industries.

The Vice-Chancellor shall be a member of each of the several Faculties and Boards of Faculties.

There shall be a dean of each Faculty elected by that Faculty, or otherwise as the Council shall direct. He shall preside at the meetings of the Faculty and hold office during such period and with such powers as shall be determined by Statute or Ordinance, and shall be eligible for re-election.

## VII. POWERS OF THE BOARDS OF FACULTIES

The Boards of Faculties respectively shall have the powers following:

To regulate, subject to the control of the Senate, the teaching and study of the subjects assigned to the Board in question.

To make recommendations as to the appointment of examiners.

To report to the Senate on Ordinances and Regulations dealing with courses of study for degrees and other distinctions, and on any questions relating to the work of the respective Faculties.

To deal with any matter referred or delegated to them by the Senate.

## VIII. CONVOCATION

A register shall be kept containing the names of all persons who are members of Convocation according to the provision made by the Charter.

The register shall be conclusive evidence that any person whose name appears therein at the time of claiming to vote in Convocation is entitled to vote, and that any person whose name does not appear therein is not so entitled.

A meeting of Convocation shall be summoned at least once in every year and at such other times as Convocation may by its by-laws determine.

A meeting of Convocation may be called by the direction of the chairman, and shall also be called on the requisition in writing of at least twenty members.

## IX. AUDITOR

The Court shall annually appoint an auditor, who shall be a member of the Institute of Chartered Accountants of England and Wales, or of the Incorporated Society of Accountants and Auditors, in the active practice of his profession, who shall receive such remuneration as may from time to time be determined by the Court.

Acceptance of office by an auditor shall be deemed to carry with it an undertaking by the auditor to the University that every certificate given by him, or passing of accounts by him, implies that he has satisfied himself by full and careful investigation [made by himself or agents, for whom he undertakes to be responsible] by every reasonable means within his power, and after the exercise of due professional skill, that the statements in the certificate are true and accurate, and that any accounts certified or passed are complete, true, and accurate.

## X. COMMITTEE FOR CONSIDERING OBJECTIONS BY THE UNIVERSITIES AT MANCHESTER AND LIVERPOOL

The joint committee to be constituted pursuant to clause XI of the Charter for considering objections made by the Victoria University of Manchester and the University of Liverpool to proposed Statutes and Ordinances, shall consist of nine members, three to be appointed by each University.

The joint committee shall be convened by the Registrar of the Victoria University of Manchester.

## XI. COMMITTEE FOR CONSIDERING OBJECTIONS TO PROPOSED STATUTES AND ORDINANCES OF THE UNIVERSITY OF SHEFFIELD

Any committee to be constituted for considering objections made by any of the universities in Manchester, Liverpool and Leeds to proposed Statutes and Ordinances of the University of Sheffield shall consist of twelve members, three to be appointed by each of the said universities.

Such committee shall be convened by the Registrar of the Victoria University of Manchester.

## XII. EXAMINATION REQUIREMENTS FOR ENTRY UPON DEGREE COURSES

The examination for matriculation into the University, to be passed by students before entering upon degree courses, shall consist of such examination or examinations as may be determined and conducted by a joint board constituted as hereinafter prescribed.

The joint board shall determine the conditions and subjects of such examination or examinations, together with the exemptions and conditions of exemption therefrom, provided that the senate of each university shall have power to exempt therefrom such persons as it may judge suitably qualified by higher study or research to enter upon a course for a degree.

The board shall, with the consent of the five universities concerned, have power to prescribe particular subjects to be passed as a condition of admission into particular Faculties, provided that at any time after any regulation to that end shall have been prescribed by the board any of the five universities shall have power to cause it to cease to be operative, on the expiration of two years from the date of notice to be given to the board, so far as concerns such university.

The regulations of the board regarding the examinations conducted by it shall not affect the power of each university 1. to require a standard higher than that of the examination for matriculation in any subject or subjects as a condition of admission into any Faculty or school; 2. to require candidates as a condition of admission into its several Faculties and Honours schools and courses leading to a particular degree to have passed in such subjects as the university may determine; or 3. to determine how far the examinations recognised by the joint board as exempting from the examination for matriculation shall be accepted by the university concerned as satisfying the requirements made by the university under sections 1. and 2. of this clause; 4. to admit students who have not passed the examination for matriculation to such classes as it may think fit.

The joint board shall consist of twenty members, four to be elected annually by each of the universities in Manchester, Liverpool, Leeds, Sheffield, and Birmingham, with power to co-opt not more than twelve other persons of experience in the practice or administration of education.

When any change in the regulations regarding the examination for matriculation is carried in the joint board by a majority consisting of less than two-thirds of the members who are present, the question at issue shall, if any four members present and voting so require, be referred to each of the five universities, who shall each then nominate two additional members of the board for the purpose of dealing with such question. The decision of the board so constituted shall be final.

The board shall send annual reports to each university.

The five universities shall contribute to the expenses of the joint board in such proportions as may be from time to time determined.

## XIII. PERIODS OF STUDY BEFORE GRADUATION*

The period of study necessary to qualify any student for graduation shall not be less than three years, all of which shall be subsequent to the date at which the student passes the examination for matriculation.

This clause shall come into operation not later than October 1st, 1906.

In the case of the Yorkshire College, and in the event of any other college or institution, or any branch or department thereof, becoming affiliated to the University within six months from the date of the Charter, the University may accept attendance which commenced on or subsequent to the 1st October, 1903, at courses of study in the Yorkshire College or in such other college or institution in place of attendance at courses of study in the University for the same period.

## XIV. DEFINITIONS

In these Statutes

'Statutes' means the Statutes of the University.

'Ordinances' means Ordinances made pursuant to the Charter or Statutes.

'Regulations' means Regulations made pursuant to the Charter or Statutes.

In witness whereof We have caused these Our Letters to be made Patent.

Witness Ourself at Westminster the twenty-fifth of April in the Fourth Year of Our Reign.

By Warrant under the King's Sign Manual.

MUIR MACKENZIE.

SEAL

## EMERGENCY STATUTES

[The effective duration of the emergency Statutes made by the Court on 27th February, 1940 and 29th May, 1941, expired on 3rd October, 1952. The text of these Statutes may be found on pages 48 to 50 of the *Calendar* for 1952-3 ]

*[The provisions of this Statute are applied only to candidates for the degree of Bachelor.]

# ORDINANCES

[Made by the Court in accordance with the provisions of clauses X and XI of the Charter]

## I. AFFILIATED COLLEGES AND INSTITUTIONS

1. Colleges and institutions, or parts thereof, may be admitted to affiliation after report by the Senate. The Senate, before recommending the affiliation of any such college or institution, shall satisfy itself:

(a) That the college or institution has attained a satisfactory standard of educational efficiency for the purposes for which affiliation is sought, and is established on a permanent basis.

(b) That the majority of regular students in such college or institution are of the age of sixteen years.

2. In the case of any affiliated college or institution, or of any part of such college or institution recognised for the purposes of this clause, students who have attained the age of seventeen years, and have passed the matriculation examination of the University, or are exempt therefrom, shall be allowed to attend at any such college or institution a part or the whole of a course of study, approved by the Senate of the University as exempting from such courses of study in the University as the Council may approve, provided that in no case shall the University confer a degree upon any person who has not attended in the University during one year at least the courses of study which have been recognised for such degree, and that in every case the period of attendance in the University of a candidate for an Honours degree shall be not less than two years.

3. The Council shall, after a report from the Senate, determine the privileges to which the students of any such affiliated college or institution shall be admitted.

4. Any college or institution desiring to avail itself of the foregoing Ordinance shall

(a) Make provision for the representation of the University on the body which determines the annual plan of study, in so far as it concerns the courses submitted for the approval of the University;

(b) Submit for the approval of the Senate of the University day courses of study, whose duration, scope, and standard shall be equivalent to the corresponding courses of the University.

5. The University shall inspect from time to time the buildings and equipment for teaching provided in any such college or institution, and shall satisfy itself as to the qualifications of any teacher therein appointed to conduct the courses offered in place of University courses.

6. The Council, after a report from the Senate, shall be entitled at any time to withdraw any privileges which may have been granted to any college or institution under these Ordinances, and to remove the said college or institution from affiliation.

## AFFILIATED COLLEGES

The College of the Resurrection, Mirfield [affiliated 18th May, 1904]. By resolution of the Council the students of this college are exempt from attendance at the University upon the first of the three years of study required for the degree of Bachelor of Arts.

The Technical College, Huddersfield [affiliated 2nd March, 1906]. By resolution of the Council, attendance upon certain classes in this college is recognised as exempting from attendance upon classes in the University in the first year of the courses required for the degree of Bachelor of Arts, Bachelor of Science (including engineering) and Bachelor of Medicine and Bachelor of Surgery.

Rawdon College, Rawdon [affiliated 17th May, 1916]. By resolution of the Council [1st October, 1915], attendance upon certain courses of study in this college is recognised as exempting from attendance upon courses in the University in the first of the three years of study required for the degree of Bachelor of Arts.

Diocesan Training College, York [affiliated 15th June, 1921]. Attendance upon certain courses of study in this college is recognised as exempting from intermediate (or introductory) courses in the University in the first of the years of study for the degrees of Bachelor of Arts and Bachelor of Science.

Leeds Technical College (printing department) [affiliated 20th December, 1922]. Affiliation granted with a view to the recognition of classes at the printing department as part of the course for the degree of Bachelor of Commerce.

## II. DEGREES IN ARTS

## III. DEGREES IN COMMERCE

## IV. DEGREES IN LAW

## V. DEGREES IN SCIENCE

## VI. DEGREES IN MEDICINE AND SURGERY

## VII. DEGREES IN DENTAL SURGERY

[Ordinances II to VII governing the above-mentioned degrees are set out in full in subsequent pages of the Calendar].

## VIII. RECOGNITION OF COURSES AND EXAMINATIONS OF THE VICTORIA UNIVERSITY

1. The Senate, or any committee of the Senate appointed for that purpose, is hereby empowered to recognise courses of study pursued and examinations passed by students of the Yorkshire College or of the University of Leeds in the Victoria University or the Victoria University of Manchester prior to 1st January, 1905, as equivalent to corresponding courses and examinations in the University of Leeds.

2. The Senate, or any committee of the Senate appointed for that purpose, is hereby also empowered to make such concessions in exemption from examinations and from attendance on courses of study, as may be required to place a past or present student of the University or of the Yorkshire College, who has been admitted thereto before 1st October, 1904, in as favourable a position in the above respects as if he had become or had continued to be a student of the Victoria University or of the Victoria University of Manchester.

3. A student of the Yorkshire College, who before 31st December, 1904, has passed a final examination of the Victoria University or of the Victoria University of Manchester, for the Bachelor's degree in the Faculty of Arts, Science, Law, or Medicine shall be entitled to be admitted to the Bachelor's degree of the University of Leeds; and if he has been admitted to the Bachelor's degree of the Victoria University or the Victoria University of Manchester he shall be entitled to proceed to the higher degrees of the University of Leeds on the same conditions as if he had graduated in this University.

## IX. RECOGNITION OF COURSES AND EXAMINATIONS OF OTHER RESIDENTIAL UNIVERSITIES*

1. Subject to the provisions of the Charter and Statutes the Senate, or any committee of the Senate appointed for that purpose, is hereby empowered to allow members of any university, in which residence is required as a condition of graduation, or members of any university who have attended courses of study at some college or other place of learning which is affiliated or associated with such university, after matriculation at the University of Leeds, and presentation of certificates of conduct satisfactory to the Senate or committee, to count such periods of residence passed by them at such other university as equivalent to such periods of residence at the University of Leeds as the Senate or committee may determine, provided that no degree of this University shall be conferred on any such person unless he shall have pursued an approved course of study in this University extending over at least two years, and shall have passed the final examinations for such degree.

2. Undergraduates of other universities who have been admitted, under this Ordinance, as members of this University may be allowed to count examinations passed by them at such other universities as equivalent to such examinations or portions of examinations other than the final examination of this University as the Senate, or any committee of the Senate appointed for that purpose may from time to time determine.

3. Undergraduates of the University of Leeds who are pursuing an approved course of instruction in any of the Honours schools of the University may be allowed to count such periods of residence passed by them at other universities during their undergraduate course as equivalent to such periods of residence at the University of Leeds as the Senate, or any committee appointed for that purpose, may from time to time determine, provided that no degree of this University shall be conferred upon any such undergraduate unless he shall have pursued an approved course of study in this University extending over at least two years, and shall have passed the Honours examination for such degree.

*[The provisions of article 1 of this Ordinance are applied only to candidates for the degree of Bachelor.]

## X. CONFERMENT OF DEGREES UPON FORMER STUDENTS OF THE YORKSHIRE COLLEGE

1. As to the conferment of *ad eundem* degrees on students who have attended full courses of study at the Yorkshire College and have graduated at various universities, but who have not been admitted to the college Associateship:

Graduates of the Victoria University shall be offered the same degrees in the University of Leeds as those which they have received from the Victoria University.

Graduates in medicine of other universities shall be admissible on application to the M.B. degree of the University of Leeds.

Applications from non-medical graduates of other universities who have been students of the Yorkshire College shall be considered on their merits.

In every case of admission under the above conditions a fee of 10s. 6d. shall be charged.

2. As to Associates of the Yorkshire College:

Graduates of the Victoria University shall be offered the same degrees in the University of Leeds as those which they have received from the Victoria University.

Graduates of other universities shall be offered the degree of Bachelor in this University in the Faculties in which they graduated elsewhere.

All Associates of the Yorkshire College admitted to degrees of the University of Leeds under these conditions shall be admitted without fee.

3. All persons admitted to degrees of the University of Leeds under the foregoing conditions shall be admissible as life members of the Convocation of the University.

4. No graduate admitted under the above conditions to a lower degree shall be precluded from proceeding in the University of Leeds to a higher degree in his particular Faculty.

## XI. STANDING OF CERTAIN GRADUATES IN PROCEEDING TO HIGHER DEGREES

1. Graduates of other universities who have been admitted to degrees of equal or similar rank in this University shall be allowed, in proceeding to higher degrees, to count their standing as graduates from the date of their graduation in such other Universities.

2. Associates by examination of the Yorkshire College who have been admitted to degrees in this University shall be allowed, in proceeding to higher degrees, to count their standing as graduates from the date of admission to the Associateship.

## XII. AWARD OF DEGREES BY SENATE

The Senate is hereby empowered to award degrees other than 1. *ad eundem* degrees, 2. degrees conferred on officers of the University, and 3. Honorary degrees, in accordance with the provision in that behalf contained in Statute I B.

## XIII. AWARD OF DEGREES BY COUNCIL

1. The Council is hereby authorised to grant to any professor of the University, or to any lecturer who is the head of any department in the University, a degree not higher than that of Master in the Faculty in which he has graduated, or, in the case of a professor or lecturer holding no degree, such degree, not higher than that of Master, as the Council may determine.

2. The Council is authorised, if it thinks fit, to grant to any other officer of the University such degree, not higher than that of Master, as it may determine, but no such degree shall be conferred until a report thereon has been received from the Senate.

3. No medical degree shall be conferred under either of the above provisions 1. and 2. upon a person who does not already possess a registrable medical qualification; and no person, in virtue of a degree conferred under either of these provisions, shall be allowed to proceed to a degree higher than that to which he has been admitted.

## XIV. JOINT MATRICULATION BOARD AND JOINT COMMITTEES

The Council is hereby empowered to elect annually, or as may be required:

1. Four members of the Joint Matriculation Board of the Universities of Manchester, Liverpool, Leeds, Sheffield and Birmingham.
2. Three members of a joint committee of the Universities of Manchester, Liverpool and Leeds, to consider objections which may be raised by one or more of those universities, to Statutes or Ordinances proposed by any of them, or by the University of Sheffield.

## XV. DIPLOMAS

Diplomas shall be granted by the University, in such subjects as the Council may from time to time determine, to students who pursue the courses of study and pass the examinations prescribed.

The Council is empowered to make from time to time Regulations under which such diplomas shall be awarded.

The award of diplomas under the provisions of this Ordinance is delegated to the Senate.

## XVI. REGULATIONS FOR PROCEDURE

The Council, Senate, Faculties, Boards of Faculties, and Convocation are hereby empowered to enact Regulations for the conduct of their business and that of their committees, subject to the provisions of the Charter and Statutes.

## XVII. FEES

The Council is hereby empowered, after giving the Senate an opportunity of reporting thereon, to appoint such registration, examination, class, laboratory, and other fees to be paid by students and others as the Council may from time to time determine, and to increase, reduce or abolish the same.

## XVIII. REGULATIONS FOR EXAMINATIONS

Subject to the provisions of the Charter, Statutes, and Ordinances of the University, the Council is hereby empowered to adopt regulations, or to delegate to the Senate the making of regulations, as to the subjects, times, modes, and standards of the examinations.

## XIX. ADMISSION TO EXAMINATIONS

Before admission to any examination candidates must pay the examination fee. The admission of all students to the examinations of the University shall be subject to the approval of the Vice-Chancellor.

## XX. EXTERNAL EXAMINERS

The Council is hereby empowered to appoint, on the recommendation of the Senate, such external examiners on such conditions as to tenure of office, remuneration, and otherwise as it may from time to time determine.

## XXI. PRIZES

The Council is hereby empowered, upon report from the Senate, to institute such class and other prizes as it may from time to time determine, and to vary their value and to abolish the same.

## XXII. EXAMINATION OF SCHOOLS, AND EXTENSION LECTURES

The Senate is hereby empowered to examine and inspect schools and other educational institutions, and to provide lectures and instruction for persons not members of the University under such Regulations as the Council may from time to time adopt. The Senate is empowered to award certificates in connection with lectures and instruction for persons not members of the University.

## XXIII. TENURE OF OFFICE OF DEANS OF FACULTIES

Deans of Faculties shall be elected for periods not exceeding two years at a time.

## XXIV. TENURE OF OFFICE OF ADDITIONAL MEMBERS OF THE SENATE

Such additional members of the Senate of the University as may be appointed by the Court under Statute V shall be appointed for one year only, but shall be re-eligible at the end of each year.

## XXV. REGISTER OF CONVOCATION

1. The Chancellor, the Vice-Chancellor, the Pro-Vice-Chancellor, the members of the Senate and the lecturers shall be registered as members of Convocation without payment of any fee, and their names shall be continued upon the register so long as they retain their qualifying offices.

2. Graduates who have been admitted to degrees of this University by reason of their having pursued courses of study in the Yorkshire College, and having

been admitted to degrees of other universities or to the Associateship of the Yorkshire College, shall be entitled to be registered immediately as life members of Convocation without payment af any further fee.

3. All persons admitted to degrees of this University prior to 1st June 1926, shall be entitled to be registered as members of Convocation upon payment of a fee of 10s. 6d.

4. Every person admitted to a degree [other than an Honorary degree] of this University on or after 1st June, 1926, shall, unless already a member of Convocation, be required to pay, prior to graduation, a fee of £1, which fee shall entitle the graduate to be registered as a member of Convocation.

5. All Honorary graduates shall be entitled to be registered as members of Convocation without payment of any fee.

## XXVI. COMMUNICATIONS FROM COUNCIL TO CONVOCATION

Convocation shall receive from the Council the draft of any Ordinance proposed which, in the opinion of the Council, would affect the status, position, rights, or privileges of Convocation or the members thereof, and further, Convocation, if it so desires, may record its opinion on any draft Ordinance so submitted within one month from the date at which it has been received, and such opinion when recorded shall be taken into consideration by the Council.

## XXVII. *AEGROTAT* DEGREE

If a candidate be prevented by illness or other sufficient cause from attending the whole or part of an examination for a degree, or from presenting any dissertation or thesis which may be required in connection with such examination, the Senate, upon report from the internal and external examiners concerned and upon such further evidence as they shall think fit, may if satisfied, thereupon treat him as a successful candidate in such examination, or impose such conditions as they think fit the fulfilment of which shall be precedent to such treatment; provided always that a candidate in an examination for a degree with Honours shall not be placed in a class, and provided also that nothing in this Ordinance shall apply to the degrees in medicine and dental surgery.

The Senate on the recommendation of the board concerned may allow a student whose course of study has been interrupted by illness or other sufficient cause to defer presenting himself for the examination in any Honours school for such period as is thought fit.

## XXVIII. ORDINANCE CONSTITUTING THE UNIVERSITY OF LEEDS INSTITUTE OF EDUCATION

[Adopted by the Court at a meeting held on the 19th May, 1948, and subsequently revised at a meeting held on 18th July, 1951.]

1. Definitions:

'The Institute' means the Institute of Education hereby established.

'The Area' means the area in which the University, through the Institute will engage in activities relating to the training of teachers.

'The Board' means the board of the Institute formed in accordance with Articles 6 and 7 hereof.

'The Professional Committee' means the professional committee formed in accordance with Articles 6 and 8 hereof.

'Member Training College' means a training college which is a constituent member institution under Articles 3 (a) hereof.

2. Title and objects: There shall be an Institute of Education to be known as the University of Leeds Institute of Education the purposes of which shall include the following:

(a) To further and to co-ordinate in the Area the provision for the training of teachers and of others preparing to engage in educational work;

(b) To promote and to provide facilities for the study of and research in education;

(c) To act as a centre of discussion and activity for teachers and others concerned with education in the Area;

(d) To perform such other functions as may be approved by the Senate and Council.

3. Membership: Membership of the Institute shall be both institutional and individual:

(a) The member institutions shall be

(i) Constituent member institutions including:

The department of education in the University of Leeds
The City of Leeds Training College
The Yorkshire Training College of Housecraft
Bingley Training College
St. John's College, York
Ripon Training College
Bretton Hall
The North Riding Training College
Huddersfield Training College

(ii) Associated member institutions including:

The City of Leeds College of Art
The department of pædiatrics and child health, University of Leeds
The department of physical education, University of Leeds
The department of psychology, University of Leeds
The department of psychiatry, University of Leeds
The Carnegie College of Physical Education

and such other institutions as may be admitted by the Council on the recommendation of the Board, either as constituent members or as associated members.*

Any member institution may be permitted to withdraw from membership upon giving at least two years notice to the Council and making provision satisfactory to the Board for the completion of the training of registered students of the Institute.

*[The changes which have taken place in the list of member institutions since 18th July, 1951, are set out in the current *Handbook* of the Institute.]

(b) The individual members shall be:

(i) The Director, the deputy Director, the Secretary and members of the academic staff of the Institute.

(ii) The principals and members of the teaching staffs of the member institutions.

(iii) The members of the Board and of the Professional Committee, together with

(iv) Such other individuals as may from time to time be admitted by the Council on the recommendation of the Board.

Individual members shall retain their membership of the Institute only for such time as they continue to hold an appointment in one of the member institutions or to be members of the Board or of the Professional Committee or for the term for which they are admitted by the Council as individual members.

Any individual member of the Institute may resign such membership at any time by letter addressed to the clerk to the Board.

4. Functions: Subject to Article 7 below, the functions of the Institute shall in clude the following:

(a) To arrange for the co-ordination of training in education over the Area as a whole.

(b) To maintain a register of all students in member institutions who are engaged in the study of education.

(c) To administer schemes drawn up under Regulations to be made by the Board for the award of a Certificate in Education of the Institute or a Graduate Certificate in Education of the Institute to mark the successful completion of a period of initial training in a Member Training College; and to recommend to the Ministry for the award of qualified teacher status:

(i) students from a member institution to whom a Certificate in Education has been awarded.

(ii) students from a member institution to whom a Graduate Certificate in Education has been awarded.

(iii) students of the University department of education who have not qualified for the award of a Graduate Certificate, but who have satisfied the Board [as advised by the Professional Committee] that they are fitted to be allowed to teach.

(d) To administer schemes drawn up under Regulations to be made by the Council for the award of a Diploma of the Institute to mark the successful conclusion of a further period of professional training under the direction of the Institute.

(e) To take over from the 'Board for the Final Examination of Students in Training Colleges in Yorkshire' in conjunction with the University of Sheffield and Hull University College, the functions of the said Board, together with the said Board's assets, liabilities and commitments.

(f) To submit to the Council proposals for a building to be equipped with libraries, conference rooms and other amenities suitable to enable such

a building to be a centre of professional interest for persons engaged in educational work within the Area.

(g) To promote consultation in the making of appointments to the staffs of all member institutions.

(h) To promote arrangements for lectures either from among the staffs of the member institutions or otherwise to give lectures, demonstrations, etc., in each or any of the member institutions and for that purpose to arrange if necessary with the member institutions for the secondment of members of their staffs.

(j) To promote arrangements where desirable for the interchange of teachers between member institutions.

(k) To promote arrangements, where desirable, for the interchange of individual students or groups of students between the member institutions.

(l) To provide or co-operate in the provision of special courses for students in training dealing with particular aspects of educational work.

(m) To provide or co-operate in the provision of refresher courses, summer schools and the like for teachers, youth leaders and others.

(n) To encourage co-ordinated investigation into educational problems and to issue publications from time to time on educational matters.

(o) To perform such other functions as may be approved by the Senate and Council.

5. Officers: The officers shall be:

(a) The Director of the Institute who shall be responsible to the Council for the work of the Institute. He shall be a professor in the University appointed by the Council after a report from the Board upon such terms and conditions as the Council may determine.

(b) The deputy Director of the Institute who shall be authorised to act for the Director in the Director's absence and shall generally assist the Director in carrying out his duties. He shall be appointed by the Council after a report from the Board upon such terms and conditions as the Council may determine.

(c) The Secretary of the Institute who shall be its executive officer and shall carry out such duties as may from time to time be assigned to him by the Director. He shall be appointed by the Council after a report from the Board upon such terms and conditions as the Council may determine.

(d) The clerk to the Board who shall be the Registrar of the University.

(e) The financial officer of the Board who shall be the Bursar of the University.

6. Government: The government of the Institute shall, subject to Article 9 hereof, be effected by means of the Board and of the Professional Committee.

7. The Board of the Institute:

(a) The Board shall consist of the following members:

(i) The Pro-Chancellor *ex officio*.

(ii) The Vice-Chancellor of the University who shall be ***ex officio*** chairman.

(iii) The chairman of the finance committee of the Council *ex officio*.
(iv) The Director and the deputy Director of the Institute *ex officio*.
(v) The principals of the member training colleges, the vice-principals of mixed member training colleges, the principals of associated member institutions and the head of the University department of education, *ex officio*, together with one other member of the staff of the University department of education nominated by the head of that department.
(vi) One representative of each of the following local education authorities:

| | |
|---|---|
| Bradford | Wakefield |
| Dewsbury | York |
| Halifax | Yorkshire (West Riding) |
| Huddersfield | Yorkshire (North Riding) |
| Leeds | |

(vii) One representative of each member training college, to be nominated by the governing body of the training college.
(viii) Ten members of the academic staff of the University appointed by the Senate.
(ix) Such other persons, not exceeding twelve in number, as the Council may from time to time appoint after report from the Board; of these not more than eight shall be teachers in schools.

(b) Members, other than *ex officio* members, shall hold office for three years and shall be eligible for re-appointment.
(c) Two assessors appointed by the Minister of Education shall be invited to attend each meeting of the Board.
(d) The Board shall meet at least twice a year.
(e) The Board shall have the following powers:
(i) To recommend to the Senate and the Council the appointment or removal of the Director, the deputy Director and the Secretary of the Institute.
(ii) To nominate, on the recommendation of the Professional Committee, internal examiners for appointment by the Senate and external examiners for appointment by the Council.
(iii) To make regulations for any purpose for which regulations are or may be authorised to be made hereunder and to amend, vary or cancel such regulations from time to time.
(iv) To control and direct the work of the Institute in accordance with the objects and functions set out in Articles 2 and 4 hereof.
(v) To consider and report to the Council upon:
(a) all projects of the Institute involving finance, accounts, investments or the use or disposal of property;
(b) the buildings, premises, furniture and apparatus and other matters needed for carrying on the work of the Institute.
(vi) To give directions to the Professional Committee and, in particular, to approve, amend, refer back or reject any act or decision of the Professional Committee.

(vii) To appoint such committees or sub-committees as may be deemed necessary.

(viii) To prescribe the mode of conducting the proceedings of the Board and the Professional Committee.

(f) The minutes of all meetings of the Board shall be submitted to the Senate and to the Council and the Board shall also furnish such other information relating to its proceedings and actions as may from time to time be required by the Senate or the Council.

8. The Professional Committee:

(a) The Professional Committee shall consist of the following members:

(i) The Vice-Chancellor *ex officio*.

(ii) The Director of the Institute who shall be chairman *ex officio*.

(iii) The deputy Director of the Institute *ex officio*.

(iv) The principals of the member training colleges, the vice-principals of mixed member training colleges, the warden of the Carnegie College of Physical Education and the head of the University department of education *ex officio*, together with one other member of the staff of the university department of education nominated by the head of that department.

(v) Four members of the academic staff of the University appointed by the Senate.

(vi) One member of the staff [not the principal or head] of each constituent member institution, to be appointed by the Board on the recommendation of the staff of that Institution.

(vii) One member of the staff of the Institute [not the Director or the deputy Director] to be appointed by the Board on the recommendation of the staff of the Institute.

(viii) Two members nominated by the Yorkshire Association of Education Officers.

(ix) Such other persons, not exceeding six in number as may be appointed by the Board from time to time; of these not more than four may be teachers in schools.

(b) Members other than *ex officio* members will hold office for three years and will be eligible for reappointment.

(c) Two assessors appointed by the Minister of Education shall be invited to attend each meeting of the committee.

(d) The Professional Committee shall have the following powers:

(i) To direct the co-ordinating work of the Institute so far as this relates to instruction and education within the Area.

(ii) To administer schemes for the award of certificates in Education and for the recommendation of students to the Ministry of Education for the award of qualified teacher status as provided in Article 4(c) above.

(iii) To administer schemes for the award of diplomas as provided in Article 4(d) above.

(iv) To recommend persons for appointment as internal examiners.

(v) To recommend persons for appointment as external examiners.
(vi) To report on any matter referred or delegated to it by the Board.
(vii) To appoint such boards of studies, committees and panels as may be deemed necessary.

The minutes of all meetings of the Professional Committee shall be submitted to the Board and the Professional Committee shall also furnish such other information relating to its proceedings and action as may from time to time be required by the Board.

9. Control: The Board of the Institute shall be responsible to the Senate and the Council of the University for the administration and finance of the Institute and the Senate and the Council shall have the power to approve, amend, refer back or reject any act of the Board and to give direction to the Board, provided always that due regard is paid to the internal autonomy of the member institutions.

The acts of the Board or of the Professional Committee shall not be invalidated by reason of any vacancy among the respective members.

10. Dissolution: The University, after giving not less than two years' notice of its intention, may dissolve the Institute of Education and in that event the premises, equipment and all assets of the Institute shall be the property of the University who shall discharge the liabilities in connection therewith and the premises, equipment and all assets of the member training colleges shall be the property of the respective training colleges, who shall respectively discharge the liabilities in connection therewith.

# THE UNIVERSITY OF LEEDS

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*Pro-Chancellor*

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PROFESSOR W. Q. KENNEDY, D.Sc., F.R.S., F.G.S., *Geology* 1945
PROFESSOR H. J. KING, B.Sc.(Eng.), Ph.D., M.I.Min.E., *Mining* 1960
PROFESSOR G. H. LATHE, M.Sc., M.D.C.M., Ph.D., *Chemical Pathology* 1957
PROFESSOR O. LATTIMORE, D.Litt., *Chinese Studies* 1963
PROFESSOR J. LE PATOUREL, M.A., D.Phil., D. de l'Univ., *Caen, Medieval History* 1945
PROFESSOR K. S. LOMAX, B.Sc., M.A. (Admin.), *Economics* 1963
PROFESSOR C. E. LUMSDEN, M.D., *Pathology* 1956
PROFESSOR T. LUPTON, B.A., Ph.D., *Industrial Relations* 1964
PROFESSOR B. LYTHGOE, M.A., Ph.D., F.R.I.C., F.R.S., *Organic Chemistry* 1953
PROFESSOR IRENE MANTON, B.A., Ph.D., Sc.D., Hon. D.Sc., Hon. Dr. Philos., F.R.S., Honorary Member of the Danish Academy of Sciences and Letters, *Botany* 1946

PROFESSOR G. P. MEREDITH, M.Sc., M.Ed., Ph.D., F.B.Ps.S., *Psychology* 1949
PROFESSOR T. F. MITCHELL, B.A., *Contemporary English* 1964
PROFESSOR J. F. NUNN, M.B., Ch.B., Ph.D., L.R.C.P., M.R.C.S., D.A., F.F.A.R.C.S., *Anaesthetics* 1964
PROFESSOR J. NUTTING, M.A., B.Sc., Ph.D., F.I.M., *Metallurgy* 1960
PROFESSOR C. L. OAKLEY, D.Sc., M.D., M.R.C.S., L.R.C.P., F.R.S., F.C.Path., *Bacteriology* 1952
B. S. PAGE, M.A., F.L.A., *Librarian* 1949
PROFESSOR C. J. POLSON, M.D., F.R.C.P., M.R.C.S., Barrister-at-Law, *Forensic Medicine* 1947
PROFESSOR R. D. PRESTON, Ph.D., D.Sc., F.Inst.P., F.L.S., F.R.S., *Plant Biophysics* 1953
PROFESSOR H. L. PRICE, M.A., M.Sc., Ph.D., F.R.Ae.S., *Mathematics* 1964
PROFESSOR I. D. RATTEE, B.Sc., A.R.C.S., *Colour Chemistry and Dyeing* 1962
PROFESSOR S. G. RAYBOULD, B.Sc.(Econ.), Ph.D., Hon.LL.D., *Adult Education* 1953
PROFESSOR A. L. ROBERTS, B.Sc., Ph.D., F.Inst.F., F.R.I.C., F.I.Ceram., Hon.M.I.Gas E., *Coal Gas and Fuel Industries* 1947
PROFESSOR A. ROBSON, B.Sc., Ph.D., A.R.I.C., *Fibre Science* 1964
PROFESSOR H. S. RUSE, M.A., D.Sc., F.R.S.E., *Pure Mathematics* 1946
PROFESSOR J. S. SCOTT, M.D., F.R.C.S.E., F.R.C.O.G., *Obstetrics and Gynæcology* 1961
PROFESSOR R. M. SHACKLETON, B.Sc., Ph.D., F.G.S., *Geology* 1962
PROFESSOR F. W. SPIERS, *C.B.E.*, Ph.D., D.Sc., *Medical Physics* 1950
PROFESSOR ARTHUR J. TAYLOR, M.A., *Modern History* 1961
THE REV. PROFESSOR E. J. TINSLEY, M.A., B.D., *Theology* 1962
PROFESSOR R. E. TUNBRIDGE, *O.B.E.*, M.Sc., M.D., F.R.C.P., J.P., *Medicine* 1946
PROFESSOR S. ULLMANN, Ph.D., D.Litt., *Romance Philology* 1953
PROFESSOR W. WALSH, M.A., *Education* 1957
PROFESSOR A. G. WARD, *O.B.E.*, M.A., F.Inst.P., *Leather Industries, 1959-61, Food and Leather Science, 1961* 1959
PROFESSOR J. H. WESTERN, B.Sc., Ph.D., F.Inst.Biol. *Agricultural Botany* 1959
PROFESSOR C. S. WHEWELL, B.Sc., Ph.D., F.R.I.C., F.T.I., *Textile Technology* 1954
PROFESSOR J. G. WILSON, M.A., Ph.D. F.Inst.P., *Physics* 1952
PROFESSOR D. R. WOOD, B.M., B.Ch., B.Sc., M.A., *Pharmacology* 1960

PROFESSOR E. J. WOOD, M.A., *Latin Language and Literature* 1938
F. W. CHATTAWAY, M.Sc., Ph.D., *Biochemistry* [Annual appointment] 1964
F. E. HOARE, M.Sc., Ph.D., A.R.C.S., F.Inst.P., *Physics* 1964
F. G. HOLLIMAN, M.A., Ph.D., F.R.I.C., F.R.S.S.Af., *Director of Combined Studies* [Annual appointment] 1964
D. W. JEFFERSON, B.A., B.Litt., *English Literature* 1964
A. LAING, M.A., Ed.B., *Education* [Annual appointment] 1964
A. B. PAIN, *T.D.*, Ch.M., F.R.C.S., *Surgery* [Annual appointment] 1964
C. C. SMITH, M.A., Ph.D., *Spanish and Portuguese Languages and Literatures* 1964
R. J. STILL, M.A., M.B., B.Chir., D.Obst.R.C.O.G., *Student Health Service* [Annual appointment] 1964

# EMERITUS PROFESSORS

WILLIAM BRADLEY, D.Sc. Ph.D., F.R.I.C.
THE REV. LAURENCE EDWARD BROWNE, M.A., D.D.
DONALD BURTON, *M.B.E.*, D.Sc., F.R.I.C.
FREDERICK CHALLENGER, B.Sc., Ph.D., D.Sc., F.R.I.C.
SIR ANDREW MOYNIHAN CLAYE, M.D., F.R.C.S., F.R.C.O.G.
BONAMY DOBRÉE, *O.B.E.*, M.A., Docteur de Dijon
WALTER MANOEL EDWARDS, *M.C.*, M.A.
FRANK SCOTT FOWWEATHER, M.Sc., M.D., F.R.C.P., D.P.H., F.R.I.C.
JOHN WILFRED HARVEY, M.A.
JOHN DAVID IVOR HUGHES, B.C.L., M.A.
JOHN JOHNSTONE JERVIS, M.D., D.P.H.
JOHN HARRY JONES, M.A., LL.D.
GEORGE WILSON KNIGHT, M.A., F.I.A.L., F.R.S.L.
WILLIAM MacADAM, M.A., B.Sc., M.D., F.R.C.P., D.P.H.
JOHN McGREGOR, B.Sc., N.D.A., N.D.D.
JAMES WALTER McLEOD, *O.B.E.*, M.B., Ch.B., Sc.D., F.R.S.
WILLIAM PROCTER MILNE, M.A., LL.D., D.Sc.
PERCIVAL JOHN MOIR, *M.C.*, M.B., Ch.B., F.R.C.S.
RICHARD DOUGLAS PASSEY, *M.C.*, M.D., D.P.H., L.R.C.P., M.R.C.S.
THOMAS TALMAGE READ, M.Ch.D., F.R.F.P.S.(G.), F.D.F.R.C.S., H.H.D.(G.), L.R.C.P.E.
JOHN HENRY RICHARDSON, M.A., Ph.D.
ERIC ARTHUR SPAUL, Ph.D., D.Sc.
JOHN BAMBER SPEAKMAN, *C.B.E.*, D.Sc., F.R.I.C., F.T.I.(Hon.)
EDMUND CLIFTON STONER, B.A., Sc.D., F.Inst.P., F.R.S.
HUBERT WALLACE SYMONS, M.B., Ch.B., F.R.C.S.
HENRY CHERRY VERSEY, D.Sc., F.G.S.
CHARLES WILFRED VINING, M.D., F.R.C.P., D.P.H.
JOHN THOMAS WHETTON, *D.S.O., O.B.E., M.C., T.D.*, M.Sc.
RICHARD WHIDDINGTON, *C.B.E.*, M.A., D.Sc., F.R.S.
ALBERT VICTOR WILLIAMSON, M.A.
RUPERT ALLAN WILLIS, D.Sc., M.D., LL.D., F.R C.S., F.R.C.P., F.R.A.C.P.

# FORMER PROFESSORS AND HEADS OF DEPARTMENTS

*Greek*

| | |
|---|---|
| WILLIAM RHYS ROBERTS | 1904–23 |
| HENRY ARDERNE ORMEROD | 1923–28 |
| WALTER MANOEL EDWARDS | 1928–50 |

*Latin*

| | |
|---|---|
| BENJAMIN MICHAEL CONNAL | 1904–26 |
| HUGH STEWART | 1926–29 |
| PETER SCOTT NOBLE | 1930–38 |

*Semitic Languages and Literatures*

| | |
|---|---|
| JOHN NOEL SCHOFIELD [non-professorial appointment] | 1941–46 |
| SIMON RAWIDOWICZ [non-professorial appointment] | 1946–48 |
| JOHN BOWMAN [non-professorial appointment] | 1948–59 |

*English Literature*

| | |
|---|---|
| CHARLES EDWYN VAUGHAN | 1904–13 |
| GEORGE STEWART GORDON | 1913–22 |
| LASCELLES ABERCROMBIE | 1922–29 |
| FRANK PERCY WILSON | 1929–36 |
| BONAMY DOBRÉE | 1936–55 |
| GEORGE WILSON KNIGHT | 1956–62 |
| PETER DEREK STREVENS (Contemporary English) | 1961–64 |

*English Language*

| | |
|---|---|
| FREDERIC WILLIAM MOORMAN | 1912–18 |
| JOHN RONALD REUEL TOLKIEN | 1924–25 |
| ERIC VALENTINE GORDON | 1926–31 |
| BRUCE DICKINS | 1931–46 |
| HAROLD ORTON | 1946–64 |

*French Literature*

| | |
|---|---|
| PIERRE HENRI MARTIN DU GILLON | 1904–13 |

*French Language and Literature*

| | |
|---|---|
| PAUL BARBIER | 1903–38 |
| IVOR DEINIOL OSBORN ARNOLD | 1938–49 |
| GEORGE THOMAS CLAPTON | 1949–64 |

*Medieval French Language and Literature*

| | |
|---|---|
| IVOR DEINIOL OSBORN ARNOLD | 1949–52 |

*Italian Language and Literature*

ADRIANO UNGARO [non-professorial appointment] 1933-40
MATTHEW FONTAINE MAURY MEIKLEJOHN [non-professorial appointment] 1946-49
FREDERICK MAY [non-professorial appointment] 1949-63

*German Language and Literature*

ALBERT WILLIAM SCHÜDDEKOPF 1904-16
CHARLES EDWARD GOUGH 1924-39
RONALD PEACOCK 1939-45

*Russian Language and Literature*

JOSHUA KOLNI-BALOZKY [non-professorial appointment] 1918-39
ROLF SHAFTLIN [non-professorial appointment] 1947-51
HARRY MAXWELL HAYWARD [non-professorial appointment] 1952-56

*Spanish Language and Literature*

PEDRO PENZOL [non-professorial appointment] 1918-45

*History*

ARTHUR JAMES GRANT 1904-27
ALEXANDER HAMILTON THOMPSON 1924-39
ARTHUR STANLEY TURBERVILLE 1929-45
DAVID CHARLES DOUGLAS 1939-45
GUY PATTERSON CHAPMAN 1945-53
NORMAN GASH 1953-55
ASA BRIGGS (Modern History) 1955-61

*Philosophy*

CHARLES MELVILLE GILLESPIE [non-professorial appointment until 1912] 1904-32
JOHN WILFRED HARVEY 1932-54
STEPHEN EDELSTON TOULMIN 1955-59

*Geography*

CHARLES BUNGAY FAWCETT [non-professorial appointment] 1919-28
ALBERT VICTOR WILLIAMSON [non-professorial appointment until 1944] 1928-53
RONALD FRANCIS EDWARD WAITE PEEL 1951-57

*Philosophy and History of Religion*

EDWIN OLIVER JAMES 1933-45

*Theology*

LAURENCE EDWARD BROWNE 1946-52
JOHN KELMAN SUNDERLAND REID 1952-61

*Education*

| | |
|---|---|
| JAMES WELTON | 1904–16 |
| JOHN STRONG | 1919–33 |
| FRANK SMITH | 1933–47 |
| ROGER NOEL ARMFELT | 1949–55 |
| WILLIAM ROY NIBLETT | 1948–59 |

*Fine Art*

| | |
|---|---|
| MAURICE DE SAUSMAREZ [non-professorial appointment] | 1951–59 |

*Architecture*

| | |
|---|---|
| BASIL SPENCE | 1955–57 |
| JAMES MAUDE RICHARDS | 1957–59 |
| WILLIAM ADAM SINGLETON | 1959–60 |
| ROBERT FURNEAUX JORDAN | 1960–62 |
| DENYS LOUIS LASDUN | 1962–63 |

*Economic and Political Science*

| | |
|---|---|
| JOHN HAROLD CLAPHAM | 1904–08 |
| DAVID HUTCHISON MacGREGOR | 1908–19 |
| JOHN HARRY JONES | 1919–46 |

*Industrial Relations*

| | |
|---|---|
| JOHN HENRY RICHARDSON | 1930–55 |
| HERBERT ARTHUR TURNER | 1962–64 |

*Social Studies*

| | |
|---|---|
| ARNOLD NIXON SHIMMIN | 1945–54 |

*Law*

| | |
|---|---|
| WALTER ROSS PHILLIPS | 1904–19 |
| JOHN DAVID IVOR HUGHES | 1919–51 |

*Mathematics*

| | |
|---|---|
| LEONARD JAMES ROGERS | 1904–19 |
| WILLIAM PROCTOR MILNE | 1919–46 |
| SELIG BRODETSKY (applied mathematics) | 1924–48 |
| JAMES WILKINSON CRAGGS | 1961–63 |

*Physics*

| | |
|---|---|
| WILLIAM STROUD | 1904–09 |
| WILLIAM HENRY BRAGG | 1909–14 |
| RICHARD WHIDDINGTON | 1919–51 |
| EDMUND CLIFTON STONER | 1939–63 |

*Chemistry*

| | |
|---|---|
| ARTHUR SMITHELLS | 1904–23 |
| ROBERT WHYTLAW WHYTLAW-GRAY | 1923–45 |

*Inorganic and Structural Chemistry*

| | |
|---|---|
| ERNEST GORDON COX | 1945–60 |

*Physical Chemistry*

| | |
|---|---|
| HARRY MEDFORTH DAWSON | 1920–39 |
| MEREDITH GWYNNE EVANS | 1939–49 |

*Organic Chemistry*

| | |
|---|---|
| JULIUS BEREND COHEN | 1904–24 |
| CHRISTOPHER KELK INGOLD | 1924–30 |
| FREDERICK CHALLENGER | 1930–53 |

*Biology*

| | |
|---|---|
| LOUIS COMPTON MIALL | 1904–07 |

*Zoology*

| | |
|---|---|
| WALTER GARSTANG | 1907–33 |
| ERIC ARTHUR SPAUL | 1933–60 |

*Botany*

| | |
|---|---|
| VERNON HERBERT BLACKMAN | 1907–11 |
| JOSEPH HUBERT PRIESTLEY | 1911–45 |

*Geology*

| | |
|---|---|
| PERCY FRY KENDALL | 1904–22 |
| ALBERT GILLIGAN | 1922–39 |
| ROBERT GEORGE SPENCER HUDSON | 1939–40 |
| HENRY CHERRY VERSEY | 1956–59 |

*Biomolecular Structure*

| | |
|---|---|
| WILLIAM THOMAS ASTBURY | 1945–61 |

*Civil and Mechanical Engineering*

| | |
|---|---|
| JOHN GOODMAN | 1904–22 |
| WILLIAM THOMAS DAVID | 1922–46 |

*Mechanical Engineering*

| | |
|---|---|
| WILLIAM THOMAS DAVID | 1946–48 |
| DERMAN GUY CHRISTOPHERSON | 1949–55 |
| DANIEL COWAN JOHNSON | 1956–62 |

*Electrical Engineering*

| | |
|---|---|
| GEORGE DUDLEY ASPINALL PARR [non-professorial appointment] | 1904–14 |
| WALTER WILLIAM EDWARD FRENCH [non-professorial appointment] | 1919–26 |
| EDWARD LEWIS ELAM WHEATCROFT | 1926–40 |

*Colour Chemistry and Dyeing*

| | |
|---|---|
| ARTHUR GEORGE GREEN | 1904–16 |
| ARTHUR GEORGE PERKIN | 1916–26 |
| FREDERICK MAURICE ROWE | 1926–46 |
| WILLIAM BRADLEY | 1948–61 |

*Leather Industries*

| | |
|---|---|
| HENRY RICHARDSON PROCTER | 1904-13 and 1914-19 |
| EDMUND STIASNY | 1913-14 |
| DOUGLAS McCANDLISH | 1919-49 |
| WILLIAM REARDEN ATKIN | 1949-50 |
| DONALD BURTON | 1951-59 |

*Coal Gas and Fuel Industries*

| | |
|---|---|
| WILLIAM ARTHUR BONE | 1906-12 |
| JOHN WILLIAM COBB | 1912-38 |
| DONALD THOMAS ALFRED TOWNEND | 1938-46 |

*Metallurgy*

| | |
|---|---|
| NORMAN JAMES PETCH | 1956-59 |

*Mining*

| | |
|---|---|
| GEORGE ROBERT THOMPSON | 1904-11 |
| ERNEST LONSDALE HUMMEL | 1913-19 |
| GRANVILLE POOLE | 1919-23 |
| JOHN ANTHONY SYDNEY RITSON | 1923-36 |
| FRANK STUART ATKINSON | 1936-40 |
| JOHN THOMAS WHETTON | 1945-60 |

*Textile Industries*

| | |
|---|---|
| ROBERTS BEAUMONT | 1904-14 |
| ALDRED FARRER BARKER | 1914-33 |
| ALBERT THEODORE KING | 1933-39 |
| ALFRED HESKEL NISSAN (wool textile engineering) | 1953-57 |
| JOHN BAMBER SPEAKMAN | 1939-63 |

*Agriculture*

| | |
|---|---|
| ROBERT SUTHERLAND SETON | 1904-32 |
| CHARLES CROWTHER (agricultural chemistry) | 1913-19 |
| NORMAN MEDERSON COMBER (agricultural chemistry) | 1932-53 |
| JOHN McGREGOR | 1934-61 |

*Anatomy*

| | |
|---|---|
| THOMAS WARDROP GRIFFITH | 1904-10 |
| JOHN KAY JAMIESON | 1910-36 |
| ARCHIBALD DURWARD | 1936-64 |

*Physiology*

| | |
|---|---|
| DE BURGH BIRCH | 1904-17 |
| HENRY STANLEY RAPER | 1917-23 |
| WILLIAM FREDERICK SHANKS | 1923-26 |
| BRYAN AUSTIN McSWINEY | 1926-36 |

*Pathology and Bacteriology*

| | |
|---|---|
| ALBERT SIDNEY LEYTON | 1904-17 |
| MATTHEW JOHN STEWART (pathology) | 1918-50 |
| JAMES WALTER McLEOD (bacteriology) | 1922-52 |
| RUPERT ALLAN WILLIS (pathology) | 1950-55 |

*Chemical Pathology*

| | |
|---|---|
| FRANK SCOTT FOWWEATHER | 1946-56 |

*Experimental Pathology and Cancer Research*

| | |
|---|---|
| RICHARD DOUGLAS PASSEY | 1926-53 |

*Medicine*

| | |
|---|---|
| ALFRED GEORGE BARRS | 1904-10 |
| THOMAS WARDROP GRIFFITH | 1910-25 |
| WALTER HENRY MAXWELL TELLING | 1925-32 |
| GEORGE WILLIAM WATSON | 1932-37 |
| WILLIAM MacADAM | 1937-46 |

*Clinical Medicine*

| | |
|---|---|
| ALFRED GEORGE BARRS | 1910-20 |
| GEORGE WILLIAM WATSON | 1925-32 |
| RAWDON AUGUSTUS VEALE | 1933-34 |
| WILLIAM MacADAM | 1934-37 |
| JOSEPH LE FLEMING COY BURROW | 1937-48 |
| STANLEY JACK HARTFALL | 1948-64 |

*Diseases of Children*

| | |
|---|---|
| CHARLES WILFRED VINING [non-professorial appointment until 1927] | 1922-46 |

*Surgery*

| | |
|---|---|
| HARRY LITTLEWOOD | 1904-10 |
| ROBERT LAWFORD KNAGGS | 1910-19 |
| BERKELEY GEORGE ANDREW MOYNIHAN | 1925-27 |
| JOSEPH FAULKNER DOBSON | 1927-33 |
| HAROLD COLLINSON | 1933-36 |
| ETHELBERT REST FLINT | 1936-40 |
| DIGBY CHAMBERLAIN | 1946-56 |

*Clinical Surgery*

| | |
|---|---|
| BERKELEY GEORGE ANDREW MOYNIHAN | 1910-25 |
| JOSEPH FAULKNER DOBSON | 1925-27 |
| HAROLD COLLINSON | 1927-33 |
| ALFRED RICHARDSON | 1933-34 |
| ETHELBERT REST FLINT | 1934-36 |
| LEONARD RALPH BRAITHWAITE | 1936-38 |
| HUBERT WALLACE SYMONS | 1940-56 |
| PERCIVAL JOHN MOIR | 1952-60 |
| DIGBY CHAMBERLAIN | 1956-61 |

*Urological Surgery*

| | |
|---|---|
| LESLIE NORMAN PYRAH | 1956-64 |

*Anæsthetics*

| | |
|---|---|
| RICHARD PENN HARBORD [non-professorial appointment] | 1947–63 |

*Obstetrics and Gynaecology*

| | |
|---|---|
| CHARLES JAMES WRIGHT | 1904-08 |
| JOHN BENJAMIN HELLIER | 1908-18 |
| EDWARD OCTAVIUS CROFT | 1918-23 |
| CARLTON OLDFIELD | 1929-30 |
| WILLIAM GOUGH | 1931-36 |
| ANDREW MOYNIHAN CLAYE | 1936-61 |

*Pharmacology*

| | |
|---|---|
| WILLIAM ALEXANDER BAIN | 1946-59 |

*Pharmacology and Therapeutics*

| | |
|---|---|
| EDMUND FAURIEL TREVELYAN [non-professorial appointment until 1905] | 1904-08 |
| HENRY JOHNSTONE CAMPBELL | 1908-19 |
| RAWDON AUGUSTUS VEALE | 1925-32 |
| STANLEY JACK HARTFALL | 1937-48 |

*Public Health*

| | |
|---|---|
| JAMES SPOTTISWOODE CAMERON | 1904-15 |
| WILLIAM ANGUS | 1917-19 |
| JOHN JOHNSTONE JERVIS | 1920-47 |
| IFORWYN GLYNDWR DAVIES | 1947-58 |

*Forensic Medicine*

| | |
|---|---|
| HENRY JOHNSTONE CAMPBELL | 1904-08 |
| FRIEDRICH WILHELM EURICH | 1908-32 |
| WALTER HENRY MAXWELL TELLING | 1932-38 |
| PETER LINDSAY SUTHERLAND | 1938-46 |

*Mental Diseases and Psychiatry*

| | |
|---|---|
| WILLIAM BEVAN-LEWIS [non-professorial appointment until 1908] | 1904-10 |
| JOSEPH SHAW BOLTON | 1911-34 |
| MATTHEW JOSEPH McGRATH [non-professorial appointment] | 1935-46 |
| HENRY VICTOR DICKS | 1946-48 |
| DOUGLAS ROBERT MacCALMAN (part-time 1954-57) | 1948-57 |
| GEORGE RONALD HARGREAVES | 1955-62 |

*Clinical Dental Surgery*

| | |
|---|---|
| THOMAS TALMAGE READ | 1931-59 |

*Institute of Education*

| | |
|---|---|
| WILLIAM ROY NIBLETT | 1947-59 |

*Librarian*

| | |
|---|---|
| MISS FANNY JULIET PASSAVANT | 1904-19 |
| RICHARD OFFOR | 1919-47 |

# RETIRED MEMBERS OF STAFF

The Council has resolved that the following shall have privileges as members of the University (see Charter XIX):

| | *Date of Retirement* |
|---|---|
| JOHN WILLIAM BAKER | 1959 |
| PHYLLIS LUCY BARTHOLOMEW | 1963 |
| GEORGIANA MAY BONSER | 1963 |
| EDWIN JOSEPH BROWN | 1956 |
| ANN FORREST BROWNLIE | 1957 |
| WINIFRED MARY BURBURY | 1960 |
| GUY PATTERSON CHAPMAN | 1953 |
| CECIL HENRY DOUGLAS CLARK | 1955 |
| IDA ELIZABETH CORK | 1963 |
| EDWIN JOHN CROSS | 1958 |
| STANLEY JAMES CURTIS | 1958 |
| ARTHUR HAROLD DAINTON | 1952 |
| CLARENCE GEORGE DURDEY | 1959 |
| DAVID HYWEL EVANS | 1963 |
| JACK EWLES | 1959 |
| CECIL WALTER GILHAM | 1956 |
| WILLIAM ROBINSON GRIST | 1946 |
| NORMAN HOLT HARTSHORN | 1961 |
| ARNOLD HAUSER | 1957 |
| DORA MARGARET HIBGAME | 1948 |
| JOHN HUME | 1955 |
| JEAN PHILIPPE INEBNIT | 1955 |
| LEONARD GEORGE JOHNSON | 1959 |
| ARTHUR LIONEL KNIGHTON | 1962 |
| RAYMOND LESLIE LANGLEY | 1957 |
| DOROTHY AMELIA LILEY | 1959 |
| FRANK ARTHUR LONG | 1959 |
| FLORENCE MARGARET MAWSON | 1962 |
| HERBERT WILLIAM MERRELL | 1947 |
| LETTICE MARY PITHER | 1963 |
| ALBERT EDWARD PYBUS | 1959 |
| GEOFFREY WALTER RICHARDSON | 1961 |
| WINIFRED FORSTER ROBSON | 1955 |
| LORNA IRIS SCOTT | 1958 |
| GRACE VALERIE MARY SELBY | 1958 |
| LUCY HELEN SHARPER | 1963 |
| WALTER STANLEY STUART | 1959 |
| THE REVEREND FATHER HENRY EDWARD SYMONDS, C.R. | 1945 |

| | *Date of Retirement* |
|---|---|
| FRANCIS LAWRY USHER | 1950 |
| WILFRED ALAN WIGHTMAN | 1962 |
| JAMES STUART WILLCOX | 1963 |

The following retired members of the staff are already, as graduates, members of the University:

| | *Date of Retirement* |
|---|---|
| GEORGE ARMITAGE | 1961 |
| HAMPSON BAINES | 1960 |
| WALTER RICHARD BERRY | 1962 |
| EDWARD ERNEST BIBBY | 1951 |
| ELIZABETH MARIA BLACKBURN | 1946 |
| SYDNEY BURR | 1950 |
| MARY CONSTANCE CALDWELL | 1956 |
| ERNEST EDWARD CATON | 1953 |
| AGUSTIN DE IRIZAR | 1958 |
| JOHN JAMES ILETT | 1949 |
| ANNIE REDMAN KING | 1948 |
| JAMES EDWARD LAYBOURN | 1951 |
| NORMAN LISSIMORE | 1963 |
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## ADULT EDUCATION AND EXTRA-MURAL STUDIES

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## ECONOMICS

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## LAW

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## MATHEMATICS

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## PHYSICAL EDUCATION

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## PSYCHOLOGY

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## SOCIAL STUDIES

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*Reader in Structural Crystallography*
Mrs. MARY R. TRUTER, B.Sc., Ph.D., *London,* A.R.C.S.

*Senior Lecturer*
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*Lecturers*
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B. L. SHAW, B.Sc., Ph.D., *Manchester*
L. D. PETTIT, M.A., D.Phil., *Oxford*
A. G. SYKES, B.Sc., Ph.D., *Manchester*
One vacancy

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D. C. GOODALL, M.A., D.Phil., *Oxford*

*Research Fellow*
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M. J. HENCHMAN, M.A., *Cambridge*, M.Sc., Ph.D., *Yale*

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*Assistant Director of Cookridge Laboratories*

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*Brotherton Research Lecturer*

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*Brotherton Research Fellow* — P. S. LITTLEWOOD, B.Sc., *Leeds*

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| | Miss IRENE WERTH, M.A., *Oxford* |
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| | A. CHADWICK, B.Sc., Ph.D., *Bristol* |
| | P. J. MILL, B.Sc., *Nottingham,* Ph.D., *Birmingham* |
| *Assistant Lecturer* | P. J. EVENNETT, B.Sc., *Liverpool,* Ph.D., *St. Andrews* |
| *Demonstrator (part-time)* | Mrs. BARBARA A. CHADWICK, B.V.Sc., *Bristol,* Ph.D., *Reading,* M.R.C.V.S. |
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| | Mrs. MARGARET H. I. DODD, B.Sc., *Aberdeen,* Ph.D., *Harvard* |
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| | D. SMITH |

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A. WESLEY, B.Sc., *London,* A.R.C.S., F.G.S., F.L.S.
J. D. LOVIS, B.Sc., *London,* Ph.D., *Leeds*
D. D. BARTLEY, B.Sc., Ph.D., *Wales*
D. H. JENNINGS, B.A., *Cambridge,* M.A., D.Phil., *Oxford*
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Miss ANNE SLEEP, B.Sc., *Exeter*

*I.C.I. Fellow*
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*Research Assistants*
L. V. EVANS, M.Sc., Ph.D., *Wales*
T. R. RICKETTS, B.Sc., Ph.D., *Leeds*
Miss M. JANE STOKER, B.Sc., *Leeds*

*Laboratory Instructor*
T. S. CROSBY, B.Sc.(Hort.), *London*

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*Electron Microscopist*
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A. HILL

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*Reader in Biomolecular Structure and Deputy Head of the Department*
K. M. RUDALL, M.Sc., *New Zealand,* Ph.D., D.Sc., *Leeds,* F.Inst.P.

*Reader in Biomolecular Structure*
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*Lecturers*
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F. G. E. PAUTARD, M.Sc., *Birmingham,* Ph.D., *Leeds,* A.R.I.C.

*Part-time Lecturer*
Miss EVA FREI, Dr. Sc. Nat., *Zurich*

*Assistant Lecturers*
D. B. SELLEN, B.Sc., *London,* Ph.D., *Southampton,* A.Inst.P.
One vacancy

*Instructor in Crystallography*
E. BEIGHTON, B.Sc., Ph.D., *Leeds*

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| *Research Fellows and Part-time Lecturers* | W. E. SEEDS, B.A., M.Sc., *Trinity College, Dublin*, Ph.D., *London* |
| | G. N. GRAHAM, B.Sc., Ph.D., *Leeds* |
| *Research Fellows* | Miss M. M. ATTWOOD, B.Sc., Ph.D., *Nottingham* |
| | K. J. PARKINSON, B.Sc., Ph.D., *Durham* |
| | B. SHELDRICK, B.Sc., *London*, Ph.D., *Leeds* |
| *Bernard Hickson Research Fellow* | J. A. PETTY, B.A., *Oxford* |
| *Koppers Research Fellow* | P. J. BAILEY, B.Sc., *Leeds* |
| *Research Assistants* | D. R. COWDREY, B.Sc., *Leeds* |
| | Mrs. E. F. DADE, B.Sc., *London* |
| | A. FINCHAM, M.Sc., *Leeds* |
| | P. G. KELLY, B.Sc., *Leeds* |
| | W. KENCHINGTON, B.Sc., *Leeds* |
| | P. T. P. OLIVER, B.A., *Oxford* |
| | R. WILSON, B.Sc., *Leeds* |
| | H. ZOLA, B.Sc., *Birmingham* |
| *Demonstrator* | Mrs. BRENDA J. NELMES, B.Sc., *London*, Ph.D., *Leeds* |
| *Research Assistant* | A. MILLARD |
| *Electron Microscopist* | R. K. WHITE |
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| *Chief Technician* | J. R. SCOTT |
| *Senior Technician* | J. LEE |

## GEOLOGY

5 Hillary Place, Leeds 2

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| *Professor* | R. M. SHACKLETON, B.Sc., Ph.D., *Liverpool*, F.G.S. |
| *Reader in Mineral Chemistry* | O. VON KNORRING, M.Sc., *Helsinki*, Ph.D., *Leeds* |
| *Senior Lecturers* | J. HARTLEY, B.Sc., *Leeds*, F.G.S. |
| | Miss DOROTHY H. RAYNER, M.A., Ph.D., *Cambridge*, F.G.S. |
| *Senior Lecturer in Geochemistry* | P. G. HARRIS, M.Sc., *New Zealand*, Ph.D., *Leeds* |
| *Lecturers* | W. C. GREGORY, B.Sc., *London*, A.R.S.M., A.M.I.M.M. |
| | A. R. J. GASKIN, M.A., B.Sc., *Oxford*, A.M.I.M.M., F.G.S. |

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| | T. N. CLIFFORD, B.Sc., Ph.D., *Leeds,* F.G.S. |
| *Lecturer in Palæontology* | J. SELWYN TURNER, M.Sc., *London,* M.R.I.A., F.G.S. |
| *Lecturer in Geochronology and Isotope Geology* | M. H. DODSON, B.A., *Cambridge,* D.Phil., *Oxford* |
| *Lecturer in Geophysics* | Vacant |
| *Assistant Lecturer* | D. S. WOOD, B.Sc., *Liverpool* |
| *Assistant Lecturer in Palaeontology* | A. LOGAN, B.Sc., Ph.D., *Durham* |
| *Oppenheimer Geological Fellows* | R. L. JOHNSON, B.Sc., Ph.D., *Leeds* |
| | J. R. VAIL, M.Sc., *British Columbia,* Ph.D., *Leeds* |
| | G. HORNUNG, B.Sc., Ph.D., *Leeds* |
| *Senior Experimental Officer* | Miss JOAN M. ROOKE, B.Sc., *Leeds,* A.Inst.P. |
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| *Research Assistant and Demonstrator (part-time)* | Mrs. MARGARET H. KERR, B.Sc., *Glasgow* |
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## PSYCHOLOGY

4, 15-17 Lifton Place and 22, Clarendon Place, Leeds, 2

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| | D. H. HOLDING, M.A., *Edinburgh,* Ph.D., *Durham* |
| | D. PRITCHATT, B.Sc., *Birmingham* and *London* |
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| | D. G. D. BOYLE, B.Sc., Ph.D., *Hull* |
| *Research Assistant* | A. W. MACRAE, B.Sc., *Edinburgh* |
| *Senior Technician* | E. SOLLITT |
| *Clerks* | Mrs. B. McCLUMPHA |
| | Mrs. ANNE V. RIDDELL |

## PHILOSOPHY

See page 155. Faculty of Arts

## GEOGRAPHY

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## PHYSIOLOGY

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## ANATOMY

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## BACTERIOLOGY

See page 196. Faculty of Medicine

## BIOCHEMISTRY

See page 193. Faculty of Medicine

## PHARMACOLOGY

See page 194. Faculty of Medicine

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A. W. CHRONOWICZ, Dipl.-Ing., *Lvov* and *Polish Technical University, London*, Ph.D., *Leeds*

M. HOLMES, B.Sc., *Leeds*, Ph.D., *Bristol*, A.M.I.C.E., A.M.I.Struct.E.

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W. HOUGHTON-EVANS, A.R.I.B.A., A.M.T.P.I.

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F. SAWKO, M.Sc., *Leeds*

J. O. SURTEES, B.Sc., *Durham*, A.M.I.C.E.

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Miss DIANA BULLUS

*Chief Technician*

S. RIDER

*Senior Technicians*

H. ROBINSON

E. C. CATTERICK

J. ELLIS

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*Professor of Engineering Fluid Mechanics*
Vacant

*Reader in Applied Thermodynamics*
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*Computational Assistant*
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D. ASTY, G.I.Mech.E.
J. S. MULLIGAN, G.I.Mech.E.
B. JOBBINS, A.M.I.Mech.E.
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| | W. G. RADFORD, A.I.S.T. |
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| | A. T. LAWSON, A.I.S.T. |
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| *Senior Lecturer and Director of the Analogue Simulation Laboratory* | P. H. WALKER, B.Sc.(Eng.), *London*, Ph.D., *Manchester*, A.M.I.E.E. |
| *Superintendent of Workshops and Laboratories* | |
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| | J. O. SCANLAN, B.E., *Dublin*, Mem.I.E.E.E. |
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| | R. LEVY, M.A., *Cambridge*, A.M.I.E.E. |
| | M. I. SOBHY, B.Sc., *Cairo* |
| *Laboratory Instructors* | L. WILLIAMS, Grad.Brit.I.R.E. |
| | D. DRING, H.N.C. |

| | |
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| *Demonstrator* | W. P. JAYASEKARA, B.Sc (Eng.), Ph D , *London* |
| *Assistant Superintendent of Workshops and Laboratories* | C. S. PETCH, A.I.S.T. |
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| *Clerical Staff* | Miss PATRICIA J. BALDWIN<br>Miss JANET M. MACFARLANE<br>Miss SUSAN E. WHITE |
| *Chief Technicians* | W. E. EARNSHAW, A.I.S.T.<br>E. A. WEBSTER |
| *Senior Technicians* | L. WILSON<br>D. L. ETHERINGTON<br>G. BARTNICKI<br>P. T. A. O'DONALD<br>A. A. BRYAN, O.N.C. |

## THE HOULDSWORTH SCHOOL OF APPLIED SCIENCE

The school comprises the three departments of gas engineering and general fuel science with ceramics, chemical engineering, and metallurgy, together with the department of applied mineral sciences. The parent department, founded in 1907 as the department of coal gas and fuel industries, was established to provide training in fuel and metallurgy as well as in refractory materials. The growth of the department during its first thirty years led to the establishment of separate degree courses based upon these subjects, together with a degree in general chemical engineering.

In 1956 the four constituent sections were reorganised as three departments, independent in themselves but so closely integrated as to form a school of applied science designed to cover the needs of a wide range of industries. In naming the school the University wished to commemorate Sir Hubert Stanley Houldsworth, Bt., Q.C., D.Sc., LL.D., a former member of the staff of the parent department and Pro-Chancellor of the University from 1949 to 1956.

In 1963 the department of applied mineral sciences, formerly the department of mining, became one of the constituent departments of the school.

The Livesey professorship was endowed in 1908 from a fund raised by public subscription from the British gas industry in memory of the late Sir George Livesey.

The school has the advantage of co-operation with the Gas Council in research supported by the Council and guided by a joint committee of the Council and the University.

| | |
|---|---|
| *Livesey Professor of Coal Gas and Fuel Industries and Chairman of the School* | A. L. ROBERTS, B.Sc., Ph.D., *Leeds*, F.Inst.F., F.R.I.C., F.I.Ceram., Hon.M.I.Gas.E. |

# GAS ENGINEERING AND GENERAL FUEL SCIENCE WITH CERAMICS

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| *Senior Lecturer in Gas Chemistry* | J. C. MACRAE, B.Sc., *Glasgow,* F.R.I.C., F.Inst.F. |
| *Lecturer in Fuel Technology* | S. C. MITCHELL, B.Sc., *London,* A.R.I.C., A.M.Inst.F. |
| *Honorary Lecturers* | F. J. DENT, *O.B.E.,* Ph.D., D.Sc., *Leeds,* M.I.Gas.E. |
| | Emeritus Professor R. J. SARJANT, *O.B.E.,* D.Sc., *London,* F.Inst.F. |
| *Lecturer in Gas Engineering* | B. A. LILLEY, B.Sc., Ph.D., *Leeds* |
| *Lecturer* | W. A. GRAY, B.Sc., Ph.D., *Leeds* |
| *Institute of Gas Engineers Research Fellow* | A. L. VICKERS, B.Sc., *Leeds* |
| *British Coke Research Association Fellow* | D. R. BALL, B.Sc., *Leeds* |

## CERAMICS

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| *Senior Lecturer* | T. G. CARRUTHERS, B.Sc., *Leeds,* A.R.I.C., F.I.Ceram. |
| *Lecturer in Ceramics and Refractory Materials* | W. E. WORRALL, M.Sc., *London,* Ph.D., *Leeds,* A.R.I.C., |
| *Honorary Lecturer* | A. T. GREEN, *C.B.E.,* D.Sc., *Leeds* |
| *Analyst* | H. A. FONER, B.Sc., *Leeds,* A.R.I.C. |
| *I.C.I. Fellow* | M. S. TITE, B.A., *Oxford* |
| *Research Assistants* | G. M. FRYER, M.Sc., *Leeds* |
| | E. W. ROBERTS, M.Sc., *Bristol* |
| | J. C. V. RUMSEY, B.Sc., *Wales* |
| | A. HEUER, B.S., *City College of New York* |
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| | A. K. DHAVALE, M.Sc., *Poona* |
| | M. J. NOONE, B.Sc., *Leeds* |
| | R. BAGGOTT, B.Sc., *Durham* |
| | R. R. SMYTH, A.B., *Louisville* |
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## CHEMICAL ENGINEERING

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| *Brotherton Senior Lecturer* | K. L. BUTCHER, B.Sc., *London*, M.I.Chem.E., F.R.I.C. |
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| | F. H. CASS, B.Sc., *Leeds* |
| | I. R. McDOUGALL, B.Sc., *London*, A.M.I.Chem.E. |
| | C. N. COLLINGE, M.A., *Cambridge*, A.M.I.Chem.E. |
| | J. R. HULETT, M.A., D.Phil., *Oxford* |
| | C. McGREAVY, B.Sc., *Leeds*, D.Eng., *Yale* |
| | D. HANDLEY, B.Sc., *London*, Ph.D., *Leeds*, A.R.I.C. |
| | P. N. SNOWDON, B.Sc., *London*, Ph.D., *Cambridge* |
| | J. R. FLOWER, M.A., *Cambridge*, Ph.D., *Edinburgh* |
| *Draughtsman Demonstrator* | R. TRIPPITT, H.N.C. |
| *I.C.I. Fellow* | C. B. A. PRICE, B.Sc., *London* |
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| | P. R. BEELEY, B.Met., Ph.D., *Sheffield*, F.I.M. |
| *Lecturers* | I. CODD, B.Sc., Ph.D., *Leeds*, A.I.M. |
| | R. M. DOUTHWAITE, B.Sc., *Leeds*, A.I.M. |
| | P. M. KELLY, M.A., Ph.D., *Cambridge* |
| | J. C. SCULLY, M.A., Ph.D., *Cambridge* |
| | G. POLLARD, M.A., Ph.D., *Cambridge* |
| | G. W. JOHNSON, B.Sc., Ph.D., *Leeds* |
| *Temporary Lecturer* | P. G. McDOUGALL |

*Assistant Lecturers*
J. R. ATKINSON, M.Sc., *Manchester*, D.Phil., *Oxford*
One vacancy

*Research Assistant*
R. M. PILLIAR, B.A.Sc., *Toronto*

*Clerks*
Miss JEAN SUMMERTON
Miss JULIEANNE HOLLIS

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*Senior Lecturer*
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*Lecturers*
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C. C. DELL, B.Sc.(Eng.), *London*, A.R.S.M., A.M.I.M.M.
R. W. GRIMSHAW, B.Sc., Ph.D., *Leeds*, F.R.I.C., F.I.Ceram.
G. M. HABBERJAM, B.Sc., Ph.D., *Leeds*, A.Inst.P.
J. McFARLANE, B.Sc., *Manchester*, B.Eng., *Sheffield*, F.G.S., A.M.I.Min.E.
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W. L. J. POTTS, B.Sc., *Durham*, A.R.I.C.S., A.M.I.Min.E.

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A. GROUNDS, B.Sc.(Tech.), *Manchester*, A.M.C.T., M.I.Min.E., F.Inst.F.
L. W. NEEDHAM, M.Sc., *Birmingham*, A.R.I.C., F.Inst.F.

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P. LAWRENCE, B.Sc., *Hull*

*Laboratory Instructor*
P. M. DAVEY

*Secretary*
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Miss BARBARA SIMPSON

*Senior Technician*
J. RIDDIOUGH

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G. DIXON-LEWIS, M.A., D.Phil., *Oxford*

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| | A. WILLIAMS, B.Sc., Ph.D., *Leeds* |
| *Research Assistants* | W. D. BUCKLEY, B.Sc., *Leeds* |
| | N. W. HOLLINGWORTH, B.Sc., *Leeds* |
| | M. KERSHAW, B.Sc., *Leeds*, A.M.Inst.F. |
| | R. G. SMITH, B.Sc., *Leeds* |
| | R. L. TAYLOR, B.Sc., *Leeds* |
| *Research Assistant (British Coke Research Association)* | M. HUTCHINSON, B.Sc., *Leeds* |
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| | G. FLETCHER |
| *Senior Technicians* | R. SWALES |
| | W. BELL |
| | E. H. CAMM |
| | J. M. GALLIVAN |
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| *Research Professor of Textile Engineering* | P. GROSBERG, M.Sc.(Eng.), Ph.D., *Witwatersrand* |
| *Professor of Fibre Science* | A. ROBSON, B.Sc., *Leeds*, Ph.D., *Durham*, A.R.I.C. |
| *Reader in Textile Industries* | N. H. CHAMBERLAIN, B.Sc., Ph.D., *Leeds*, F.T.I. |

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|---|---|
| *Reader in Textile Physics* | H. J. WOODS, M.A., *Oxford*, F.Inst.P. |
| *Senior Lecturer in Yarn Manufacture* | P. P. TOWNEND, B.Sc., Ph.D., *Leeds*, F.T.I. |
| *Senior Lecturer in Weaving Mechanism* | D. C. SNOWDEN, M.Sc., *Leeds*, F.T.I. |
| *Senior Lecturer in Textile Design* | C. KISBY, A.R.C.A., A.T.I. |
| *Senior Lecturer in Textile Testing* | W. J. ONIONS, B.Sc., *Wales*, F.T.I. |
| *Lecturer in Cloth Analysis and Cloth Structure* | D. YOUNG, A.T.I. |
| *Lecturers in Textile Industries* | L. PETERS, B.Sc., *London*, M.Sc., Ph.D., *Leeds*<br>G. BROOK, B.Sc., Ph.D., *Leeds*, A.Inst.P.<br>P. A. SMITH, B.Sc., Ph.D., *Leeds*, A.T.I. |
| *Senior Lecturer in Textile Engineering* | D. L. MUNDEN, B.Sc., *Leeds*, F.T.I. |
| *Lecturers in Textile Engineering* | K. HEPWORTH, B.Sc., *London*, Ph.D., *Leeds*<br>One vacancy |
| *Honorary Lecturer in Textile Engineering* | G. F. RAPER, M.A., *Cambridge* |
| *Lecturers in Textile Chemistry* | J. W. BELL, B.Sc., Ph.D., *Leeds*<br>E. V. TRUTER, B.Sc., Ph.D., *London*, A.R.C.S., D.I.C., A.R.I.C.<br>P. T. SPEAKMAN, M.A., D.Phil., *Oxford*<br>J. M. WOODHOUSE, M.A., D.Phil., *Oxford* |
| *Lecturer in the Chemistry of High Polymers* | Vacant |
| *Senior Lecturer in Textile Physics* | J. SIKORSKI, Mgr. Inz., *Warsaw*, M.Sc., Ph.D., *Leeds*, F.Inst.P. |
| *Lecturers in Textile Physics* | D. J. JOHNSON, M.Sc., *Leeds*<br>One vacancy |
| *Research Chemist and Honorary Lecturer* | D. I. FOTHERGILL, B.Sc., *Leeds* |
| *Honorary Fellow* | H. B. CARTER, B.V.Sc., *Sydney* |
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*Senior Lecturer in Colour Chemistry*

A. T. PETERS, Ph.D., D.Sc., *Manchester*, F.R.I.C., A.Mus.T.C.L.

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| *Senior Research Lecturer in Colour Chemistry* | F. K. SUTCLIFFE, M.Sc., *Manchester*, Ph.D., *Leeds* |
| *Lecturer in Dyeing* | C. B. STEVENS, B.Sc., Ph.D., *Leeds*, F.S.D.C. |
| *Lecturer in Colouring Matters* | D. PATTERSON, M.Sc., Ph.D., *Bristol* |
| *Lecturer in Colour Chemistry* | F. JONES, B.Sc.(Tech.), *Manchester*, Ph.D., *Leeds* |
| *Assistant Lecturer in Colour Chemistry* | A. D. BROADBENT, B.Sc., *Leeds*, Dr.sc.techn., *Zürich* |
| *Research Assistant in Dyeing* | K. S. MURTHY, B.Sc., *Andhra*, B.Sc.(Tech.), *Bombay* |
| *Research Assistant in Colour Chemistry* | Vacant |
| *Bradford Dyers' Association Research Fellow* | Vacant |
| *Brotherton Research Fellow in Physical Chemistry* | A. TETLOW, B.Sc., *London* |
| *Assistant Dyer* | F. D. DICKINSON |
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L. A. PERKIN, B.Sc., *Leeds*, LL.B., *London*, F.R.I.C.

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A. A. WILLIAMS, B.Sc., *Leeds*

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S. J. CHINN, B.Sc., *Leeds*

*Clerks*
Mrs. ELIZABETH BRIGGS
Miss JANET JACOBS

*Senior Technician in Charge of Workshop*
E. BELL

*Senior Technician (Tannery)*
A. W. GRIFFITHS

*Senior Technician (Chemical Laboratories)*
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*Clive Behrens Lecturer*
P. W. BRIAN, Sc.D., Ph.D., *Cambridge*, F.R.S.

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*Lecturer and Farm Director*
J. DALLEY, B.Sc., *Leeds*

*Lecturer and Deputy Farm Director*
J. R. PROUD, B.Sc., *Leeds*, N.D.A.

*Lecturers*
D. R. HODGSON, B.Sc., Ph.D., *Leeds*, Dip. Agric., *Cambridge*
D. C. DALTON, B.Sc.(Agric.), *Durham*, Ph.D., *Wales*
J. HODGSON, B.Sc., *Leeds*

| | |
|---|---|
| *Demonstrators* | B. CHANDLER, B.Sc., *London*<br>One vacancy |
| *Experimental Officers* | A. F. C. CALDER, N.D.A.<br>R. N. FLINT, N.D.A., S.D.D.H.<br>One vacancy |
| *A.R.C. Research Assistant in Pig Husbandry* | F. D. de B. HOVELL, B.Sc., *Reading* |
| *A.R.C. Research Assistant* | R. EDWARDS, B.Sc., *Leeds*, M.Sc., *London* |
| *Research Assistant in Sow Nutrition* | I. H. PIKE, B.Sc., *Leeds* |
| *P.I.D.A. Research Fellow in Pig Husbandry* | V. R. FOWLER, B.Sc., *Reading* |
| *Hargreaves Research Assistant* | A. P. DRAYCOTT, B.Sc., *Leicester*, Dip.Agric., *Cambridge* |
| *C.E.G.B. Research Assistant in Agronomy* | Mrs. JOAN LOVEGROVE, B.Sc., *London*, A.R.C.S. |
| *N.I.A.B. Regional Trials Officer* | M. J. FURBER, B.Sc.(Agric.), *Reading*, Dip.Agric., *Cambridge* |
| *N.I.A.B. Assistant Regional Trials Officer* | R. M. DRAKE-BROCKMAN, B.Sc., *Reading* |

AGRICULTURAL BACTERIOLOGY

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| *Lecturer* | A. N. BARKER, M.Sc., Ph.D., *Leeds* |
| *A.R.C. Research Assistant in Insect Pathology* | A. H. ROGERS, M.Sc., *Adelaide* |

AGRICULTURAL BOTANY

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| *Lecturers* | D. J. HARBERD, M.Sc., *Wales*<br>Miss MARGERY J. WREN, B.Sc., Ph.D., *Manchester*<br>T. F. PREECE, M.Sc., *Wales* |
| *A.R.C. Research Assistant* | M. OWEN, B.Sc., *Wales* |

AGRICULTURAL CHEMISTRY

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| *Professor* | Vacant |
| *Lecturers* | W. N. TOWNSEND, B.Sc., *Leeds*<br>G. H. SMITH, B.A., *Cambridge*, Ph.D., *Nottingham* |
| *Assistant Lecturer* | E. A. KIRKBY, B.Sc., *Durham*, A.R.I.C. |

*Analyst* — G. R. LAX, A.R.I.C.

*C.E.G.B. Research Assistants* — M. J. CAWOOD, B.Sc., *Leeds*
J. D. R. MAWER, B.Sc., *Manchester*, M.Sc., Dip.Agric.Sci., *Wales*

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*Senior Lecturer* — A. G. JEFFREY, B.Com., *Leeds*

*Lecturers* — J. B. BUTLER, M.Sc., *London*, M.Com., *Birmingham*
C. J. BLACK, B.Sc.(Agric.), *London*, B.Litt., Dip.Agric.(Econ.), *Oxford*, N.D.A.
I. G. SIMPSON, M.Sc., *Reading* (*on leave*)
A. J. WYNNE, B.Sc., *London*, N.D.A.
Mrs. MORAG C. SIMPSON, B.Sc.(Econ.), M.Sc.(Agric.), *London* (*on leave*)
A. A. MARSH, B.Sc.(Agric.), *Reading*, Dip.Agric.Econ., *Oxford*
M. BLACK, B.Sc., *Leeds*, Dip.Agric.(Econ.), *Oxford*

*Farm Management Liaison Officer* — J. W. WOOD, B.Sc.(Agric.), *London*, M.Sc., *Ontario*

*Investigational Assistants* — A. OLDFIELD
Miss JEAN B. D. RADFORD
E. DAWSON, B.Sc., *Leeds*, N.D.A., N.D.D.
L. W. BOLTON, A.C.W.A., A.C.I.S.
E. G. HUNT
A. W. HALES, B.Sc.(Hort.), *Reading*
J. K. HARDIE, N.D.A.

AGRICULTURAL ZOOLOGY

*Senior Lecturer* — N. H. E. GIBSON, B.Sc., *London*, Ph.D., *Leeds*

*Lecturer* — B. WHITTINGTON, B.Sc., Ph.D., *Sheffield*

VETERINARY SCIENCE

*Veterinary Officer and Lecturer* — K. G. TOWERS, B.V.Sc., *Liverpool*, M.R.C.V.S.

*Assistant Lecturer* — J. M. FORBES, B.Sc., *Nottingham*

## ADMINISTRATIVE, CLERICAL AND TECHNICAL STAFF

| | |
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| *Chief Technician* | G. E. TEASDALE, A.I.S.T. |
| *Senior Technicians* | W. P. DAVIES<br>Mrs. L. M. JOHNSON<br>J. E. CHAPPELOW |

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| | J. A. SHARP, M.B., Ch.B., Ph.D., *Leeds* |
| *Lecturer* | B. BALLANTYNE, B.Sc., M.B., Ch.B., *Leeds*, M.R.C.S., L.R.C.P., M.I.Biol. |
| *Honorary Lecturer* | K. M. RUDALL, M.Sc., *New Zealand*, Ph.D., D.Sc., *Leeds*, F.Inst.P. |
| *Demonstrators* | G. A. BUNCH, M.B., Ch.B., *Leeds* |
| | G. DEANE, M.B., B.S., *London*, L.R.C.P., M.R.C.S. |
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| | D. G. COMERFORD, M.B., Ch.B., *Leeds* |
| | M. J. MERLIN, M.B., Ch.B., *Leeds*, D.Obst.R.C.O.G. |
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| *Medical Research Council Fellow* | Mrs. JULIA M. FOURMAN, M.B., B.S., *London*, S.R.N. |
| *Clerk* | Miss ANN M. CAMERON |
| *Chief Technician* | W. HUTCHINSON, A.I.S.T. |
| *Senior Technician* | R. A. ADKIN, A.I.S.T. |

## PHYSIOLOGY

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| *Reader in Renal Physiology* | W. J. O'CONNOR, M.A., *Cambridge*, M.D., *Adelaide* |
| *Senior Lecturers* | H. R. NOLTIE, M.A., B.Sc., *Aberdeen* |
| | R. J. LINDEN, M.B., Ch.B., Ph.D., *Leeds* |
| | P. P. NEWMAN, M.D., *Liverpool* |

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C. KIDD, B.Sc., Ph.D., *Durham*
J. R. LEDSOME, M.D., *Edinburgh*
D. H. PAUL, B.Sc., Ph.D., *London*
D. L. MATTHEWS, B.Sc., M.B., Ch.B., *Leeds*

*Demonstrator*

R. HAINSWORTH, M.B., Ch.B., *Leeds*

*Joint Research Post*

J. NORMAN, M.B., Ch.B., *Leeds*, F.F.A.R.C.S.

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Miss KATHLEEN M. DAWSON

*Chief Technician*

H. SALTER, F.I.S.T.

*Electronic Engineer*

E. S. STAINTHORPE, Grad.Brit.I.R.E.

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9 Hyde Terrace, Leeds 2

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*Professor*

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T. J. BOWEN, M.A., B.Sc., *Oxford*
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*Lecturer (part-time)*

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*Honorary Lecturer*

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*Demonstrator*
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Miss MARY R. HAMILTON, B.Sc., *Leeds*
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K. A. ABRAHAM, M.Sc., Ph.D., *Agra*
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*Clerk*
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*Senior Lecturer in Pharmacology*
G. A. MOGEY, M.D., *Belfast*

*Senior Lecturer in Pharmaceutics and Head of the Division of Pharmacy*
R. C. KAYE, B.Pharm., Ph.D., *London*, F.P.S.

*Senior Lecturer in Pharmacological Chemistry*
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*Lecturers in Pharmacology*
D. MACKAY, B.Sc., Ph.D., *Aberdeen*
E. LETLEY, B.Sc., Ph.D., M.B., B.S., *London*, L.R.C.P., M.R.C.S.

*Lecturer in Pharmacognosy*
G. A. NELSON, M.Sc., Ph.D., *Leeds*, F.P.S., F.L.S.

*Assistant Lecturer in Pharmaceutics*
H. SEAGER, B.Sc., *Leeds*

*Assistant Lecturer in Pharmacological Chemistry*
S. G. WILLIAMS, B.Sc., *Leeds*

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J. WHITE, M.P.S., D.B.A.

*Honorary Demonstrator in Pharmacology*
K. A. EXLEY, M.D., *Leeds*, D.Obst. R.C.O.G.

*Clerk*
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*Senior Technician*
H. D. D. O'NEILL

## PATHOLOGY

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*Senior Lecturers*
T. W. SUTHERLAND, M.D., *Leeds*, M.C.Path.
C. J. E. WRIGHT, M.Sc., M.D., *Leeds*, M.C.Path.

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| *Lecturers* | F. A. O'M. SHIEL, M.B., B.Ch., B.A.O., B.Sc., *National University of Ireland*, M.C.Path. |
| | C. G. WOODS, M.B., Ch.B., B.Sc., *Leeds*, M.C.Path. |
| | P. N. COWEN, B.Sc., *Edinburgh*, Ph.D., *London*, M.B., B.S., *Durham*, M.C.Path. |
| | B. E. ROBERTS, M.B., Ch.B., *Leeds* |
| *Lecturer (part-time)* | W. GOLDIE, M.A., M.B., Ch.B., *Aberdeen*, F.R.C.P., *London* and *Edinburgh*, F.C.Path. |
| *Senior Lecturer in Neuropathology* | D. G. F. HARRIMAN, M.D., *Belfast*, M.R.C.P., M.C.Path. |
| *Lecturer in Urological Pathology* | C. K. ANDERSON, M.B., Ch.B., *St. Andrews*, M.C.Path. |
| *Lecturer (part-time) in Blood Transfusion* | J. A. V. SHONE, L.M.S.S.A., L.R.C.P., M.R.C.S., F.C.Path. |
| *Honorary Research Fellow* | Emeritus Professor R. A. WILLIS, D.Sc., M.D., *Melbourne*, LL.D., F.R.C.S., F.R.C.P., F.R.A.C.P. |
| *Honorary Lecturer in Obstetric and Neonatal Pathology* | H. G. KOHLER, Dr.Med.Univ., *Prague*, M.C.Path. |
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| *Research Fellow* | B. S. D. RAJ, M.A., M.Sc., *Madras*, Ph.D., *Oregon* |
| *Research Assistants in Experimental Cytology* | Mrs. MARGARET JENNINGS, M.Sc., *Leeds* |
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| | Miss KATE E. CREED, B.A., *Cambridge* |
| | K. BRADBURY, B.Sc., *Leicester*, M.Sc., *Birmingham* |
| *Temporary Research Assistant* | Miss C. ELIZABETH HARDER, B.Sc., *Ottawa*, M.Sc., *Saskatchewan* |
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| | Miss DIANA S. C. RANGER |
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| *Chief Supervisor in Hæmatological Technique* | C. W. BUCHAN, F.I.M.L.T. |
| *Chief Supervisor in Histological Technique* | A. LAING, A.I.S.T. |

## CHEMICAL PATHOLOGY

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*Professor of Clinical Investigation* — L. P. R. FOURMAN, M.D., D.Sc., *London*, F.R.C.P.

*Senior Lecturer and Director of the Steroid Laboratory* — S. R. STITCH, B.Sc., Ph.D., *Bristol*

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M. J. LEVELL, M.A., *Cambridge*

*Research Assistants*

H. ROCHMAN, M.B., Ch.B., *Capetown*
D. B. MORGAN, M.B., Ch.B., *Wales*
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P. BRESLOFF, B.Sc., *Leeds*
P. S. LORD, A.R.I.C.

*Analyst* — Vacant

*Senior Experimental Officer* — R. G. LESTER, B.Sc., *Leeds*

*Biochemists*

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Mrs. K. FORESTAL

*Chief Technician* — A. RUMFITT, F.I.M.L.T., A.I.S.T.

## BACTERIOLOGY

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*Reader in Public Health Bacteriology*
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J. W. CZEKALOWSKI, M.D., D.T.M. & H., *Edinburgh*, M.Sc., *Leeds*, M.C.Path.
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G. EAVES, B.Sc., *Manchester*, Ph.D., *Leeds*, A.Inst.P.
T. H. WILLIETS, M.B., Ch.B., *Birmingham*

*Lecturer in Medical Mycology*
C. J. P. LA TOUCHE, M.Sc., L.A.H., *Dublin*, M.C.Path.

*Demonstrators*
Two vacancies

*Honorary Demonstrators*
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H. V. WYATT, B.Sc., Ph.D., *London*

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Mrs. MARY FREEMAN
Mrs. MARJORIE KIDD
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S. PECK, A.I.M.L.T.
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## EXPERIMENTAL PATHOLOGY AND CANCER RESEARCH

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*Senior Research Fellow and Assistant Director of Cancer Research*
Vacant

*Senior Lecturer in Experimental Biochemistry*
L. H. STICKLAND, M.A., Ph.D., *Cambridge*

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| *Senior Lecturer* | D. B. CLAYSON, M.A., *Oxford*, Ph.D., *Leeds* |
| *Lecturer* | L. R. A. BRADSHAW, B.Sc., *Sheffield*, Ph.D., *Leeds* |
| *Lecturer (part-time)* | Vacant |
| *Research Assistants* | H. J. SMITH, B.Sc., *London*<br>J. J. CHILDS, B.Sc., *Leeds*, M.Sc., *Sheffield*<br>Miss SANDRA PRENDERGAST, B.Sc., *Manchester*<br>D. J. PEEL, B.Sc., *Sheffield*<br>Miss CHRISTINE E. REEVE, B.Sc., *Bristol*<br>Miss MARGERY WOOD, B.Sc., *Leeds*<br>J. C. TOPHAM, B.Sc., *Leeds*<br>C. H. UM, M.D., *Seoul*, D.P.H., *London*, D.I.H.<br>P. K. GOSWAMI, M.B., B.S., *Gauhati*, Ph.D., *Leeds*<br>A. J. BROWN, B.Sc., *Glasgow*<br>K. D. CHANDRADASA, B.Sc., *London*<br>T. A. LAWSON, B.Sc., *Aberdeen* |
| *Research Assistants (part-time)* | Mrs. MARJORIE PARSONS, M.B., Ch.B., *Leeds*<br>Mrs. GRETTA M. THOMAS, M.D., *Leeds* |
| *Analyst* | R. TURNER, L.R.I.C. |
| *Cancer Research Fellows:*<br>*Henry Oxley Fellow* | Mrs. HONOR M. ANTHONY, M.B., Ch.B., *Leeds* |
| *Elizabeth and Louisa Ward Fellow* | Vacant |
| *J.W. Wootton Research Fellow* | Vacant |
| *Angus Rhodes Research Fellow* | Miss MARY R. ANDERSON, M.B., B.S., *Durham*, D.C.H., D.P.H. |
| *Secretary* | Mrs. JILL P. KOTKAS |
| *Clerk* | Mrs. MARJORIE WILSON |
| *Research Technologist* | G. LITTLEWOOD, A.I.M.L.T. |

# MEDICINE

## MEDICINE

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| *Reader* | D. TAVERNER, *M.B.E.*, M.D., *Leeds*, F.R.C.P. |
| *Senior Clinical Lecturers* | J. R. H. TOWERS, M.A., M.D., *Cambridge*, F.R.C.P. |
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| | R. N. TATTERSALL, *O.B.E.*, M.D., *London*, F.R.C.P. |
| *Senior Lecturer in Rheumatology* | V. WRIGHT, M.D., *Liverpool*, M.R.C.P. |
| *Senior Lecturer in Biochemistry in Relation to Medicine* | D. A. HALL, B.Sc., Ph.D., *Leeds* |
| *Clinical Lecturer* | W. WHITAKER, B.Sc., M.D., *Leeds*, F.R.C.P. |
| *Lecturers* | G. A. ROSE, M.A., D.M., *Oxford*, F.R.I.C. |
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| | M. S. LOSOWSKY, M.D., *Leeds*, M.R.C.P. |
| | D. R. SMITH, M.B., B.S., *Durham*, M.D., *Malaya*, M.R.C.P. |
| *Part-time Lecturer in the General Practice of Medicine* | R. A. MURRAY SCOTT, M.A., M.D., *Cambridge* |
| *Part-time Lecturer* | J. R. FOUNTAIN, M.D., *Edinburgh*, M.R.C.P.E. |
| *Temporary Lecturer* | I. F. MACRAE, M.B., B.S., *London*, M.R.C.S., L.R.C.P. |
| *Honorary Lecturers* | H. DROLLER, M.D., *Munich*, M.R.C.P., F.R.C.P.E. |
| | C. J. HAYTER, B.Sc., M.B., B.S., *London*, M.R.C.P. |
| *Senior Registrar and Tutor* | J. L. JAMES, M.B., Ch.B., B.Sc., *Bristol*, M.R.C.S., M.R.C.P., *London* and *Edinburgh* |
| *Research Assistant* | D. BARNETT, M.A., B.M., B.Ch., *Oxford* |
| *Research Fellow* | B. DELVES, B.Sc., *Leeds* |
| *May and Baker Fellow* | D. E. CLARK, M.B., Ch.B., *Leeds* |

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| *Medical Research Council Research Assistant* | Mrs. ANN M. CAUSTON, B.Sc., Ph.D., *London* |
| *Medical Illustrator* | H. GRAYSHON LUMBY, M.S.I.A., N.D.D. |
| *Biochemist* | Vacant |
| *Almoner* | Miss ELEANOR M. BOOTH, A.M.I.A. |
| *Part-time Instructor in Practical Nursing Procedures* | Miss B. CHAMPNEY, S.R.N., S.T.D. |
| *Clerks* | Miss BARBARA KNOWLES<br>Miss ANNE P. PADGETT<br>Miss ELIZABETH T. HURST |

DERMATOLOGY

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| | S. T. ANNING, *T.D.*, M.A., M.D., *Cambridge*, F.R.C.P. |
| *Clinical Lecturer* | N. R. ROWELL, M.B., B.S., *Durham*, M.R.C.P., D.C.H. |
| *Lecturers in Medical Mycology* | C. J. P. LA TOUCHE, M.Sc., L.A.H., *Dublin*, M.C.Path. |
| | D. G. SCOTT, M.B., Ch.B., *Edinburgh* |
| *Honorary Demonstrator* | A. J. E. BARLOW, M.D., *Leeds*, L.R.C.P., M.R.C.S. |
| *Senior Registrar and Tutor* | T. W. STEWART, M.B., Ch.B., *Manchester*, M.R.C.P.E. |

INFECTIOUS DISEASES

| | |
|---|---|
| *Senior Clinical Lecturer* | E. C. BENN, M.B., Ch.B., D.P.H., *Liverpool* |

NEUROLOGY

| | |
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| *Senior Clinical Lecturers* | H. G. GARLAND, *T.D.*, M.D., *Leeds*, F.R.C.P. |
| | M. J. PARSONAGE, B.Sc., M.B., Ch.B., *Manchester*, M.R.C.S., F.R.C.P., D.C.H. |
| *Part-time Demonstrator* | J. B. COOK, M.D., *London*, M.R.C.P. |

RHEUMATISM RESEARCH

| | |
|---|---|
| *Research Fellow in the Surgery of Rheumatism* | Vacant |
| *Research Fellow in Rheumatism* | Vacant |

TUBERCULOSIS

| | |
|---|---|
| *Part-time Lecturer* | G. F. EDWARDS, *M.B.E.*, M.B., B.S., *London*, M.R.C.P. |

## VENEREAL DISEASES

| | |
|---|---|
| *Clinical Lecturer* | J. A. H. HANCOCK, M.R.C.S., L.R.C.P. |
| *Part-time Demonstrator* | Mrs. JESSIE R. G. BUCHANAN, M.B., Ch.B., *Edinburgh* |

## PÆDIATRICS AND CHILD HEALTH

27 Blundell Street, Leeds 1

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| *Professor* | W. S. CRAIG, B.Sc., *Glasgow,* M.D., *Edinburgh,* F.R.C.P.E., F.R.C.P., F.R.S.E. |
| *Senior Lecturer* | M. F. G. BUCHANAN, M.B., Ch.B., *Edinburgh,* F.R.C.P.E., D.C.H., *London* |
| *Senior Clinical Lecturer* | E. C. ALLIBONE, M.D., *Leeds,* Ph.D., *Birmingham,* F.R.C.P., D.P.M. |
| *Lecturers* | G. M. LEWIS, M.B., Ch.B., *Leeds,* M.R.C.P.E., D.C.H., *London* |
| | J. M. LITTLEWOOD, M.B., Ch.B., *Leeds,* M.R.C.P.E., D.C.H., *London* |
| *Acting Tutor* | D. H. Fox, M.B., Ch.B., *Leeds,* D.C.H., *London* |
| *Honorary Lecturer* | M. W. ARTHURTON, M.D., B.S., *London,* M.R.C.P., D.C.H. |
| *Part-time Lecturer* | Mrs. JOAN M. MACKINNON, M.B., Ch.B., *Edinburgh* |
| *Honorary Demonstrator in Child Health* | Miss E. CLARE ILLINGWORTH, B.Sc., M.D., *Leeds,* L.R.C.P., M.R.C.S., D.R.C.O.G., D.C.H., *London* |
| *Honorary Instructor in Pædiatric Nursing Procedure* | Mrs. MARGARET L. PEEL, S.R.N., S.R.C.N. |
| *Honorary Instructor in the Nursing Care of the Newborn* | Miss MARY PATTULLO, S.R.N., S.C.M. |
| *Honorary Almoner in Social Pædiatrics* | Vacant |
| *Secretary* | Miss ELIZABETH M. BOND |
| *Clerks* | Miss PAULINE A. JONES |
| | Mrs. EDITH SALT |

## PSYCHIATRY

15 Hyde Terrace, Leeds 2

| | |
|---|---|
| *Nuffield Professor and Head of the Department* | M. HAMILTON, M.D., *London,* M.R.C.P., D.P.M. |

*Senior Lecturers in Psychiatry*
E. A. M. WOOD, M.B., Ch.B., *Edinburgh,* M.R.C.P.E., D.P.M.
C. M. TONKS, M.B., Ch.B., *Leeds,* M.R.C.P., D.P.M.

*Senior Lecturer in Clinical Psychology*
R. J. McGUIRE, M.A., B.Sc., B.Ed., *Glasgow*

*Temporary Lecturer in Psychiatry*
Mrs. BRENDA GRANT, M.B., Ch.B., *Liverpool,* M.D., *New York State,* M.R.C.S., L.R.C.P., M.R.C.P.E., M.R.C.P.G., D.P.M.

*Lecturers in Clinical Psychology*
A. J. YOUNG, M.A., *Cambridge,* B.Ed., *Edinburgh*
R. G. WEBSTER, M.A., *Aberdeen*

*Lecturer in Psychiatric Social Work*
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Mrs. H. MARY GILYARD
Mrs. JOYCE GRADWICK
Mrs. AUDREY C. GREEN
Mrs. MARIAN HALEY
Miss SHIRLEY HARGREAVES
Mrs. JEAN HARRISON
Mrs. ANNE M. HILL
Mrs. LINDA M. HILL
Miss CAROL M. HORTON
Mrs. FREDA HUTTON
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Miss ROSEMARY JORDAN
Mrs. JOAN JOWETT
Mrs. CONSTANCE M. LANGTON
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Mrs. ELIZABETH MARSHALL
Miss ANITA E. A. MAUDE
Miss D. PHYLLIS PENNINGTON
Miss BRONWYN PLANT
Mrs. HAZEL I. RAYNER
Miss ANN REYNOLDS
Miss MARIAN ROBERTS
Mrs. CONSTANCE M. SAMWELL
Miss MARY SENIOR
Miss ALVEENA C. SMITH
Mrs. DENISE M. SMITH
Miss JEAN M. TAYLOR
Mrs. BARBARA TODD
Mrs. BETTY TURNER
Mrs. PATRICIA A. TURNER
Miss ANNE P. TURPIN
Mrs. DOROTHY VALLANDER
Miss S. PENNY WILLIAMS

CLERICAL STAFF IN THE REGISTRAR'S OFFICE

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Miss ELIZABETH P. ALLNATT
Miss GILLIAN ARNOLD
Mrs. MARGIT ARONS
Miss MURIEL M. BARNES
Mrs. CATHERINE G. BARTHOLOMEW
Mrs. LEONORA M. BARTON
Mrs. PATRICIA A. BEANLAND
Miss VALERIE BEAUMONT
Miss GLENYS BEDFORD
Miss P. LESLY BEST
Mrs. B. JEAN BOOTH
Miss ROSALIND H. BROADLEY

Miss CHRISTINE E. BROWN
Mrs. JENNIE BUTTERFIELD
A. C. CLARKE
Miss ELIZABETH M. DAVEY
Mrs. JENNIFER DE VILLIERS, M.A., *Cambridge*
Miss JACQUELINE DIMOND
Miss CHRISTINE M. EASTWOOD
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Mrs. MARGARET C. GLEDHILL
Miss HELEN E. GOLDTHORPE
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Mrs. DOROTHY INCE
Miss URSULA JOYCE
Miss JOAN KER
Miss PENELOPE A. LARKIN
Miss ANNE LARWOOD
Mrs. IDA LAYCOCK
Mrs. MARGARET A. LEWIS
Mrs. VERONICA M. LOVELL
Mrs. CONSTANCE MEAGER
Mrs. E. MAY MELLOR
Mrs. PATRICIA MORRIS, B.A., *Sheffield*
Mrs BETSY K. NADIN
Miss GERALDINE NEAL
Miss JUNE M. OATES
Miss GILLIAN PALMER
R. PARKER
Miss CELIA M. PARKINSON
Miss SHEILA M. REDPATH
Miss LILIAS A. SAGAR
Miss ELAINE SEAGAL
Miss JUNE SENIOR
Mrs. JESSIE SPENCER
Miss MARGARET E. TIDGEWELL
Miss M. ANN UTLEY
Miss ROSALIE T. WALKER
Miss MARGARET WARD
Miss ELSIE M. WILSON
Miss EMILDA WILSON
Mrs. FREDA J. WILSON
Mrs. MARIA WILSON

| | |
|---|---|
| *Surveyor of the Fabric* | W. M. HIGGINS, *M.M.*, Dipl.Arch., Leeds, A.R.I.B.A. |
| *Assistant Surveyor of the Fabric* | A. GILPIN, F.R.P.S. |
| *Senior Architectural Assistant* | R. CULLINGWORTH |
| *Administrative Assistant* | F. H. RIPPING |
| *Architectural Assistants* | C. W. EVANS<br>B. HILL<br>A. S. HINCHLIFFE<br>J. LONGBOTTOM<br>J. WARDMAN |
| *Junior Draughtsmen* | M. J. BUTLER<br>J. FRIMPONG |
| *Electrical Engineer* (retires 31.12.64) | H. PLUMMER |
| *Electrical Engineer* | H. CLEE, A.M.I.E.E. |
| *Assistant Engineer* | W. H. LINDLEY |
| *Mechanical Engineer* | A. HARPER, A.M.Inst.F. |
| *Assistant Engineer* | N. TAYLOR |

| | |
|---|---|
| *Technical Assistants* | A. AINLEY<br>D. H. ALLEN<br>G. R. HARTLEY<br>D. L. McGRAIL<br>C. ROWLING |
| *Superintendent of Cleaning* | G. A. FREDERICKS, M.B.I.C.Sc. |
| *Supervisor of Women Cleaners* | Mrs. RACHEL WILLIAMSON |
| *Senior Clerk of Works* | J. SWINDALE |
| *Clerks of Works* | G. W. MASON<br>F. W. ABBOTT |
| *Assistant Clerks of Works* | A. BARRETT<br>J. R. GRICE |
| *Foreman Joiner* | S. CLARKSON |
| *Foreman Plumber* | L. MOSBY |
| *Foreman Painter* | A. DAWSON |
| *Foreman Cleaner* | C. MEGGINSON |
| *Foreman Mechanical Fitter* | S. WALKER |
| *Foreman Electrician* | E. C. YATES |
| *Superintendent of Gardens* | B. G. BROOKS, D.H., *Edinburgh* |
| *Head Porter* | J. BRUMPTON, *T.D.* |

## THE UNIVERSITY UNION

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| *President* | I. L. MORRISON, B.A., *Leeds* |
| *Secretary* | R. A. YOUNG |
| *Clerk of the University Union* | H. BLOOD, *M.B.E.* |
| *Administrative Assistant* | M. HOLLINGWORTH |
| *Clerical Assistant* | K. ROBINSON |
| *Clerks* | Mrs. NANCY M. MAJOR<br>Mrs. EDNA WILSON<br>Miss JANET ELIZABETH WILKINSON |
| *Porter-Caretaker of the Union Building* | E. H. JONES |

## THE OLD STUDENTS' ASSOCIATION

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| *President* | C. KEIGHTLEY, M.Sc., *Leeds* |
| *President of the London Branch* | Capt. H. WARD, M.Sc., *Leeds* |
| *President of the West Riding Branch* | Mrs. D. ELIZABETH HOWARTH |
| *Honorary Treasurer* | P. C. THORNBURN, B.Sc., *Leeds* |
| *Honorary Secretaries* | Mrs. BERTHE KEIGHTLEY<br>D. L. MUNDEN, B.Sc., *Leeds*, F.T.I. |

*Honorary Editor* — A. POLLARD, B.Sc., *Leeds*, A.R.I.C., A.M.I.Chem.E., A.Inst.P.

## UNIVERSITY HOUSE

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*Deputy Chief Catering Officer and Manageress of the Senior Common Room* — Miss LILIAN RHODES

*Supervisor* — Miss JANE THOMPSON

*Assistant Manageress of the Senior Common Room* — Miss FRANCES M. WHITE

## THE OFFICERS' TRAINING CORPS

41 University Road, Leeds 2

*Commanding Officer* — Lt-Col. J. A. NORTHOVER

## THE UNIVERSITY AIR SQUADRON

*Commanding Officer* — Squadron Leader R. T. F. PLOWMAN

# REPRESENTATIVES OF THE UNIVERSITY ON COMMITTEES AND ON OTHER INSTITUTIONS

*The number following the date indicates the number of years in the term of the appointment.*

## THE JOINT MATRICULATION BOARD

| | *Appointment expires* |
|---|---|
| Professor EVANS | June 1965 (1) |
| Professor GILLIES | June 1965 (1) |
| Professor J. G. WILSON | June 1965 (1) |
| Professor E. J. WOOD | June 1965 (1) |

## COURTS OF OTHER UNIVERSITIES

| | | |
|---|---|---|
| Birmingham | Mr. B. S. PAGE | Dec. 1966 (3) |
| Bristol | Professor WALSH | May 1965 (7) |
| Hull | Professor GILLIES | July 1966 (3) |
| Lancaster | Professor CARTER | |
| Liverpool | Professor R. F. BROWN | Dec. 1967 (3) |
| Nottingham | Professor FITZGERALD | Feb. 1967 (3) |
| Sheffield | Professor CLAPTON | June 1966 (3) |

## EDUCATION COMMITTEES

| | | |
|---|---|---|
| North Riding | Professor RAYBOULD | March 1967 (3) |
| East Riding | Professor BYWATER | Feb. 1965 (1) |
| Keighley Committee for Education | Dr. M. R. R. DAVIES | May 1965 (1) |
| Morley Further Education Sub-Committee | Dr. F. J. FOWLER | June 1965 (1) |

## AFFILIATED INSTITUTIONS AND MEMBER TRAINING COLLEGES OF THE INSTITUTE OF EDUCATION

| | | |
|---|---|---|
| College of the Resurrection, Mirfield | Professor RUSE | June 1966 (3) |
| Huddersfield College of Technology | Professor CARTER | May 1965 (1) |
| St. John's College, York | Dr. K. LOVELL | Oct. 1965 (1) |
| Bingley Training College | Professor DENNY* / Mr. C. M. JONES | |
| Bretton Hall | Professor WHEWELL* / Mr W. B. THOMPSON | |
| Huddersfield Training College | Professor CARTER | Dec. 1966 (3) |
| Ilkley College of Housecraft | Miss F. M. STEVENS* / Miss A. J. MARTIN | |
| City of Leeds College of Art | Mr. J. F. FRIEND* | |
| City of Leeds Training College and Carnegie College of Physical Education | Mr. A. M. KEAN* / Mr. H. R. NOLTIE | |

* Nominated by the Institute of Education

| | | |
|---|---|---|
| City of Leeds Day Training College | Professor WALSH* | April 1965 (1) |
| | Professor CAMERON | April 1965 (1) |
| Margaret McMillan Training College | Mr. A. M. KEAN | April 1967 (3) |
| North Riding Training College | Professor RAYBOULD | March 1969 (5) |
| | Miss M. METCALFE SMITH* | March 1969 (5) |
| Ripon Training College | Professor TINSLEY* | |
| Trinity and All Saints Colleges | Professor CAMERON | |
| | Professor FLETCHER* | |
| Woolley Hall | Mr. A. M. KEAN* | |
| | Mr. J. G. MATTOCK* | |
| Yorkshire Training College of Housecraft | Miss M. E. A. BOULTWOOD* | |

## GOVERNING BODIES OF SCHOOLS

| | | |
|---|---|---|
| Aireborough County Secondary Schools | Miss O. A. PARRY | Dec. 1967 (3) |
| Askrigg, Yorebridge Grammar School | Dr. J. MacGREGOR | March 1967 (3) |
| Barnsley and District: | | |
| Broadway Technical Grammar School | Professor KING | May 1967 (3) |
| Holgate Grammar School | Professor OAKLEY | Jan. 1967 (5) |
| Grammar School Foundation | Professor OAKLEY | Jan. 1967 (3) |
| Batley: | | |
| Grammar School Foundation | Dr. J. P. ROBERTS | March 1967 (3) |
| Group 1 Secondary Schools | Miss J. DERRICK | July 1967 (3) |
| Bentham, Collingwood and Baynes Foundation | Emeritus Professor J. W. HARVEY | Dec. 1968 (5) |
| Beverley Grammar School | Emeritus Professor VERSEY | Dec. 1966 (3) |
| Bingley Grammar School | Mr. K. L. BUTCHER | Sept. 1967 (3) |
| Bradford Girls' Grammar School | Mrs. R. E. TUNBRIDGE | Oct. 1965 (3) |
| Bradford Grammar School | Professor A. J. BROWN | Dec. 1966 (3) |
| Bridlington School and School Foundation | Mr. W. H. BODDINGTON | Aug. 1966 (3) |
| | | Nov. 1967 (3) |
| Brighouse: | | |
| Grammar School for Girls | Miss S. A. WALLBANK | Dec. 1967 (3) |
| Rastrick Grammar School | Mr. P. M. SHEARD | July 1966 (3) |
| Calder High School | Miss S. A. WALLBANK | July 1967 (3) |
| Castleford Secondary Schools | Miss J. STOTT | July 1967 (3) |
| Cleckheaton, Whitcliffe Mount Grammar School | Mr. J. C. MACRAE | Dec. 1965 (3) |
| | Professor TUNBRIDGE | Dec. 1965 (3) |
| Colne Valley Secondary School | Dr. W. BELFIELD | Dec. 1967 (3) |
| Cudworth Secondary School | Dr. P. H. J. H. GOSDEN | Dec. 1967 (3) |
| Dewsbury Secondary Schools | Dr. G. L. ISLES | June 1966 (3) |
| Drax, Read Grammar School | Professor WESTERN | March 1967 (3) |
| Easingwold Grammar and Modern School | Mr. T. B. CALDWELL | March 1967 (3) |
| Elland Grammar School | Mr. H. BAXANDALL | Dec. 1967 (3) |
| Eston Grammar School | Mr. F. A. ABERG | March 1967 (3) |
| Felkirk County Secondary School | Mr. J. C. MACRAE | Dec. 1967 (3) |
| Goole: | | |
| Grammar School<br>Modern School | Mrs. B. ATKINSON | Dec. 1967 (3) |

* Nominated by the Institute of Education

| | | |
|---|---|---|
| Halifax: | | |
| Crossley and Porter Schools and Foundation | Dr. J. E. GARSIDE | May 1966 (5)<br>May 1967 (3) |
| Rishworth Grammar School | Professor JAMES | March 1965 (3) |
| Harrogate: | | |
| County Secondary Schools (Claro Division) | Miss M. E. A. BOULTWOOD | July 1967 (3) |
| Grammar School | Professor POLSON | July 1967 (3) |
| High School | Dr. P. A. BRISCOE | July 1967 (3) |
| Heckmondwike Grammar School | Dr. E. R. CLARK | Dec. 1967 (3) |
| Hemsworth: | | |
| Grammar School<br>Modern School | Mr. R. E. MORGAN | Dec. 1967 (3) |
| Hipperholme Grammar School | Mr. W. B. THOMPSON | Nov. 1966 (3) |
| Huddersfield, Holly Bank Special School | Professor CRAIG | Jan. 1967 (5) |
| Ilkley Grammar School and Foundation | Professor LE PATOUREL | July 1965 (3) |
| Keighley: | | |
| School<br>Girls' Grammar School | Dr. M. R. R. DAVIES | May 1967 (5)<br>June 1965 (3) |
| Drake and Tonson's Foundation | Dr. M. R. R. DAVIES | April 1967 (3) |
| Kinsley Modern School | Mr. R. E. MORGAN | Dec. 1967 (3) |
| Knaresborough, King James's Grammar School and Grammar School Foundation | Professor POLSON | April 1965 (3) |
| Leeds Agnes Stewart C. of E. Secondary School | Miss J. BLOXHAM | July 1967 (3) |
| Leeds Education Committee | | |
| Advisory Boards: | | |
| Allerton Area | Emeritus Professor VERSEY | Oct. 1965 (1) |
| Central Area | Professor RUSE | Oct. 1965 (1) |
| East Leeds Area | Dr. K. LOVELL | Oct. 1965 (1) |
| Lawnswood Area | Dr. F. E. HOARE | Oct. 1965 (1) |
| | Mrs. M. S. GOSDEN | Oct. 1965 (1) |
| Roundhay Area | Miss L. W. BREBNER | Oct. 1965 (1) |
| | Mr. A. M. KEAN | Oct. 1965 (1) |
| Seacroft Area | Mr. H. BAINES | Oct. 1965 (1) |
| South Leeds Area | Professor BERESFORD | Oct. 1965 (1) |
| West Central Area<br>West Leeds Area | Dr. G. STAINSBY | Oct. 1965 (1) |
| Branch Colleges: | | |
| Building | Mr. W. HOUGHTON-EVANS | June 1965 (1) |
| Commerce | Mr. H. SPEIGHT | June 1965 (1) |
| Engineering and Science | Professor WARD | June 1965 (1) |
| Leeds Girls' High School | Professor ULLMANN | June 1966 (3) |
| Leeds Grammar School | Professor WALSH | May 1965 (1) |
| | Professor WILSON | May 1965 (1) |
| Leeds, Mount St. Mary's College | Miss V. N. R. McCRIRICK | June 1966 (3) |
| Lupton Foundation | Mrs. E. M. TODD | Feb. 1968 (4) |
| Malton Grammar School | Mr. W. H. TRICKETT | Oct. 1969 (5) |
| Mirfield Grammar School | | Sept. 1964 (5) |
| Morley: | | |
| Grammar School<br>Modern Schools | Dr. F. J. FOWLER | July 1967 (3) |

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|---|---|---|
| Normanton Grammar School Foundation | | Dec. 1964 (3) |
| Northallerton Grammar School | Dr. J. MacGREGOR | May 1965 (5) |
| Ossett Grammar School | Dr. A. N. BARKER | Dec. 1967 (3) |
| Otley, Prince Henry's Grammar School and Foundation | Dr. J. E. GARSIDE | Nov. 1966 (5) |
| Pickering, Lady Lumley's Grammar and Modern School and Foundation | Mr. W. R. GRIST | May 1967 (3) |
| Pontefract: | | |
| The King's School | Mr. J. W. COX | Dec. 1967 (3) |
| The King's School Foundation | Mr. J. W. COX | July 1967 (3) |
| County Secondary Boys' School | Mr. J. W. COX | Dec. 1967 (3) |
| Pontefract and District Girls' High School | Mrs. E. HARRISON | Dec. 1967 (1) |
| Secondary Girls' School | Mrs. E. HARRISON | |
| Pudsey: | | |
| County Secondary Schools | Dr. R. REED | Dec. 1967 (3) |
| Fulneck Boys' School | Dr. J. W. BELTON | March 1967 (3) |
| Fulneck Girls' School | Miss F. M. STEVENS | March 1967 (3) |
| Redcar: | | |
| Cleveland Grammar School | Mr. J. W. SAUNDERS | March 1967 (3) |
| Coatham School | Mr. J. W. SAUNDERS | Oct. 1969 (5) |
| Richmond High School for Girls | Miss I. WERTH | March 1967 (3) |
| Ripon Grammar School | Miss F. M. STEVENS | July 1967 (3) |
| Rothwell Grammar School | | |
| Royston Secondary School | | |
| Scarborough: | | |
| Girls' High School | Miss M. E. A. BOULTWOOD | May 1967 (3) |
| High School for Boys | Dr. J. R. LEWIS | May 1967 (3) |
| Sedbergh School | Mr. D. E. F. BINYON | July 1966 (3) |
| Selby Grammar School | Miss V. N. R. McCRIRICK | July 1967 (3) |
| Selby High School for Girls | Miss V. N. R. McCRIRICK | Dec. 1964 |
| Settle, Giggleswick School | Professor BYWATER | March 1967 (3) |
| Settle High School | Miss A. J. MARTIN | July 1967 (3) |
| Shipley, Salt Grammar School | Dr. N. H. E. GIBSON | Sept. 1965 (1) |
| Skipton: | | |
| Girls' High School | Miss J. BLOXHAM | April 1967 (5) |
| Ermysted's Grammar School | Mr. D. E. F. BINYON | Jan. 1965 (3) |
| Slaithwaite Educational Foundation | Mr. H. BAXANDALL | April 1967 (3) |
| South Elmsall and South Kirkby County Secondary Schools | Mr. J. W. COX | Dec. 1967 (3) |
| Sowerby Bridge County Secondary Schools | Mrs. E. P. THOMPSON | July 1967 (3) |
| Stanley Modern School | | |
| Tadcaster: | | |
| Grammar School | Dr. D. G. BURNS | June 1967 (3) |
| Oglethorpe and Dawson Educational Foundation | Mr. A. K. C. OTTAWAY | Nov. 1965 (3) |
| Thirsk: | | |
| Grammar School | Miss S. A. WALLBANK | March 1967 (3) |
| Skellfield School | Mrs. C. S. WHEWELL | |
| Todmorden Secondary Schools | Mr. H. STANSFIELD | July 1967 (3) |
| Upper Agbrigg Secondary Schools | Mr. H. BAXANDALL | July 1967 (3) |

| | | |
|---|---|---|
| Upton Modern School | Mr. A. K. C. OTTAWAY | Dec. 1967 (3) |
| Wakefield: | | |
| Grammar School | Professor FITZGERALD | July 1965 (3) |
| Silcoates School | Dr. J. W. BAKER | July 1965 (3) |
| Whitby Grammar School | Mr. A. E. EARLE | March 1967 (3) |
| Wortley Free School Trust | Professor ROBERTS | May 1967 (3) |
| Yarm Grammar School | Mr. J. W. SAUNDERS | March 1967 (3) |
| York: | | |
| Pocklington School | Mr. W. TWEDDLE | May 1965 (3) |
| St. Peter's School | Professor DAVISON | Dec. 1968 (5) |
| York Secondary Schools: | | |
| Region 1 | Dr. DOROTHY H. RAYNER | May 1967 (3) |
| Region 5 | Mr. A. WISE | July 1967 (3) |

## OTHER BODIES

| | | |
|---|---|---|
| Adult Education, Universities Council for | Professor CAMERON<br>Professor RAYBOULD | |
| Agricultural Botany, Council of the National Institute of | Professor BYWATER | Jan. 1966 (5) |
| Agricultural Education, Joint Education Committee for | Professor BYWATER | |
| Airedale and Wharfedale Institute of Further Education | Mr. J. T. GLEAVE | |
| Akroyd Foundation | Professor COWLING<br>Professor DAVISON | June 1965 (5)<br>June 1965 (5) |
| Archæology, Council for British | Professor DAVISON<br>Mr. B. R. HARTLEY | |
| Archives, West Riding of Yorkshire (Northern Section) Committee of the National Register of | Professor A. J. BROWN<br>Professor LE PATOUREL<br>Mr. B. S. PAGE | |
| Barnsley College of Technology | Professor KING | July 1967 (3) |
| Bradford Institute of Technology | Professor NUTTING | |
| Brighouse Children's Theatre | Mr. E. G. HAUGER | July 1967 (3) |
| British Co-ordinating Committee for International Studies | Professor TAYLOR | |
| British Drama League (Northern Area Executive Committee) | Mr. C. L. BARBER | |
| British Legion, Advisory Council on Adult Education of the | Professor RAYBOULD | |
| British Universities Film Council | Mr. C. WOODHEAD | July 1966 (3) |
| Castleford, Whitwood Mining and Technical College | Mr. W. L. J. POTTS | Dec. 1967 (3) |
| Catterick Camp, Co-ordinating Committee for Higher Education in | Professor RAYBOULD | |
| City and Guilds of London Institute: Advisory Committees: | | |
| Dyeing of Textiles | Mr. C. L. BIRD | |
| Leather Manufacture | Emeritus Professor BURTON | |
| Consultative Committee for Textile Subjects | Professor WHEWELL | |
| Clinical Research, Joint Committee for | The VICE-CHANCELLOR | March 1965 (1) |
| | The DEAN OF THE FACULTY OF MEDICINE | March 1965 (1) |
| | Professor TUNBRIDGE | March 1965 (1) |

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|---|---|---|
| Coxwold Charity | The Rev. D. J. HILL | Oct. 1965 |
| Dewsbury, Batley and Mirfield Group Hospital (Nurses Education Committee) | Mr. A. K. C. OTTAWAY | April 1965 (1) |
| Dewsbury and Batley Technical and Art College | Mr. D. C. SNOWDEN | July 1965 (3) |
| Domestic Studies, National Council for | Miss J. G. DENNY | |
| Educational Research, National Foundation for | Professor WALSH | |
| Federated Superannuation System for Universities, Central Council of | Mr. E. WILLIAMSON | Dec. 1964 (1)<br>Dec. 1964 (1) |
| Field Studies Council, General Advisory Committee | Dr. H. HENSON<br>Dr. W. A. SLEDGE | |
| General Dental Council | Professor HOPPER | July 1969 (5) |
| General Medical Council | Mr. A. B. PAIN | July 1965 (3) |
| Halifax: Percival Whitley College of Further Education | Professor NUTTING | May 1967 (3) |
| Hamlyn Trust | Professor JAMES | March 1969 (5) |
| Harrogate Area, Further Education in the | Dr. P. A. BRISCOE | July 1967 (3) |
| Health Visitors Training Centres Standard Conference | Dr. A. N. MacPHAIL<br>Miss R. E. CHAMBERS | |
| Hemsworth Mining and Technical Institute | Mr. J. McFARLANE | Dec. 1967 (3) |
| Higher Education Overseas, Inter-University Council for | The VICE-CHANCELLOR | July 1969 (5) |
| Holgate Hill Educational Settlement, York | Dr. T. B. CALDWELL | Jan. 1965 (1) |
| Hospital Standing Joint Committee | The VICE-CHANCELLOR | April 1965 (1) |
| | The DEAN OF THE FACULTY OF MEDICINE | April 1965 (1) |
| | Professor SPIERS | April 1965 (1) |
| I.C.I. Fellowships, Inter-University Standing Consultative Committee on | Professor LYTHGOE | |
| Keighley Technical College | Mr. W. J. ONIONS | May 1967 (3) |
| Leeds Area Nurse-Training Committee | Miss U. M. LISTER | March 1966 (5) |
| Leeds Children's Holiday Camp Association | Miss E. P. M. BAILEY | |
| Leeds College of Art | Professor BELL | Oct. 1965 (1) |
| Town Planning Advisory Committee | Professor DICKINSON<br>Professor EVANS<br>Professor GREBENIK | |
| Leeds College of Technology | Professor COLE | Oct. 1965 (1) |
| Leeds Council of Social Service | Professor GREBENIK | |
| Leeds International Council | Mr. A. LAING | |
| Leeds-Lille Friendship Committee | Professor CLAPTON | |
| Leeds Productivity Committee | Mr. R. SHILTON | |
| Leeds Regional Medical Recruitment Committee | The DEAN OF THE FACULTY OF MEDICINE | March 1965 (1) |

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|---|---|---|
| Naples Zoological Station Committee | Professor DODD | |
| National Advisory Council for Training and Supply of Teachers | Professor FLETCHER | |
| National Leathersellers College | Professor WARD | July 1966 (4) |
| National Poultry Diploma Board | Professor BYWATER | Dec. 1965 (3) |
| North Riding Advisory Committee for Agricultural Education | Professor WESTERN | April 1967 (3) |
| Provincial Agricultural Economics Service, Advisory Committee | Professor BYWATER | |
| Public Records, Committee on | Professor LE PATOUREL | |
| Regional Cancer Service, Special Advisory Committee on | Professor GREEN | June 1965 (1) |
| | Professor TUNBRIDGE | June 1965 (1) |
| Regional Rheumatism Committee | The VICE-CHANCELLOR | |
| | Professor HEMINGWAY | |
| | Dr. V. WRIGHT | |
| Religious Education Council of the Diocese of Ripon | Mr. W. B. THOMPSON | May 1967 (3) |
| Roman York Excavation Committee | Mr. B. R. HARTLEY | |
| Roundhay High School Scholarship Fund, Administrative Committee | Dr. D. JACKSON | |
| Royal Anthropological Institute, Joint Committee on Research and Teaching | Dr. L. F. HENRIQUES | Dec. 1967 (5) |
| Social and Public Administration, Joint Universities Council for Social Administration Committee | Professor GREBENIK | Sept. 1965 (1) |
| | Professor A. H. HANSON | Sept. 1965 (1) |
| Public Administration Committee | Professor GREBENIK | Sept. 1965 (1) |
| | Mrs. C. D. E. COLLINS | Sept. 1965 (1) |
| | Professor A. H. HANSON | Sept. 1965 (1) |
| Swarthmore Settlement Centre, Leeds | Emeritus Professor J. W. HARVEY | Dec. 1965 (3) |
| | Dr. J. W. BELTON | Dec. 1965 (3) |
| Universities and Accountancy Profession, Joint Committee | Mr. P. M. SHEARD | |
| Wakefield, Pinderfields Hospital School of Remedial Gymnastics | Mr. R. E. MORGAN | July 1967 (3) |
| | Dr. S. E. FINLAY | July 1967 (3) |
| | Mr. J. G. MATTOCK | July 1967 (3) |
| West Riding Central Examinations Council | Dr. K. LOVELL* | June 1967 (3) |
| West Riding Consultative Committee for Education | Mr. C. M. JONES | March 1965 (1) |
| West Riding T.A. and A.F. Association | Lt.-Col. WILLIAMSON | Nov. 1966 (3) |
| Wool Industries Research Association | Professor WHEWELL | |
| Wool Textile Research Council | The VICE-CHANCELLOR | April 1966 (3) |
| | Professor WHEWELL | April 1966 (3) |
| Yorkshire Academic Board for Advanced Technology and Commerce | The VICE-CHANCELLOR | March 1967 (3) |
| | Professor COLE | March 1967 (3) |
| | Dr. F. E. HOARE | March 1967 (3) |
| | Professor ROBERTS | March 1967 (3) |
| | Professor WHEWELL | March 1967 (3) |

* Nominated by the Institute of Education

| | | |
|---|---|---|
| Yorkshire Council for Further Education | The VICE-CHANCELLOR | March 1965 (3) |
| | Professor ROBERTS | March 1965 (3) |
| Yorkshire Council for Further Education: | | |
| Standing Committee | Professor EVANS | March 1965 (3) |
| Committees: | | |
| Art Education | Mr. E. CAMERON | March 1965 (3) |
| Business Studies | Mr. H. SPEIGHT | March 1965 (3) |
| Chemistry | Dr. N. H. CHAMBERLAIN | March 1965 (3) |
| Civil Engineering | Professor EVANS | March 1967 (3) |
| Coal Mining | Professor KING | March 1965 (3) |
| Electrical Engineering | Mr. G. L. BIBBY | March 1965 (3) |
| Fuel | Professor ROBERTS | March 1965 (3) |
| Gas | Professor ROBERTS | March 1965 (3) |
| Leather Industry | Professor WARD | March 1965 (3) |
| Management Studies | Mr. F. P. G. WHITAKER | March 1967 (3) |
| Mechanical Engineering | Dr. A. S. LEAH | March 1965 (3) |
| Metallurgy | Professor NUTTING | March 1965 (3) |
| | Dr. P. R. BEELEY | March 1965 (3) |
| Programme for the Training of Teachers | Mr. A. M. KEAN* | March 1965 (3) |
| Textiles | Mr. W. J. ONIONS | March 1965 (3) |
| | Professor WHEWELL | March 1965 (3) |
| Consultative Committee on Agricultural Education | Professor WESTERN | March 1965 (3) |
| Advisory Panels: | | |
| Physics | Dr. E. F. W. SEYMOUR | March 1965 (3) |
| Educational Activities Among Adults | Mr. J. T. GLEAVE | March 1965 (3) |
| Joint Panel on Education for Local Government Officers | Professor A. H. HANSON | March 1965 (3) |
| Yorkshire Council of Social Service | Professor GREBENIK | |
| Yorkshire County Boy Scouts' Association | Professor COWLING | |
| Yorkshire Federation of Women's Institutes, Committees on: | | |
| Drama | Miss P. M. S. COBB | March 1964 (3) |
| Education and Public Questions | Mr. T. B. CALDWELL | March 1964 (3) |
| Yorkshire (W.R.) Institute of Agriculture, Askham Bryan | Professor BYWATER | March 1967 (3) |
| Yorkshire Museum and Art Gallery Service | Mr. B. S. PAGE | |
| Yorkshire Rural Community Council | Mr. T. B. CALDWELL | May 1967 (3) |
| Young Men's Christian Association, Board of Management, City of Leeds | Mr. A. LAING | June 1969 (5) |
| Zion Sunday School Fund | Professor TINSLEY | |

* Nominated by the Institute of Education

# EXTERNAL EXAMINERS

## *The Faculty of Arts*

| | |
|---|---|
| *Greek* | Professor R. P. WINNINGTON-INGRAM, King's College, University of London |
| *Latin* | Professor E. LAUGHTON, University of Sheffield |
| *Hebrew* | The Rev. Dr. N. H. SNAITH, Greenacres, Castle Lane, Thetford, Norfolk |
| *Arabic* | Dr. R. WALZER, St. Catherine's College, University of Oxford |
| *English Literature* | Professor F. T. PRINCE, University of Southampton and Professor D. DAICHES, University of Sussex. |
| *English Language* | Professor G. L. BROOK, University of Manchester |
| *English as a Second Language* | Mr. J. BRUTON, The British Institute, Madrid |
| *Icelandic* | Mr. P. G. FOOTE, University College, University of London |
| *French* | Professor R. J. NORTH, University of Keele, and another to be appointed |
| *Portuguese* | Mr. R. C. WILLIS, University of Manchester |
| *Ancient History* | Professor E. LAUGHTON, University of Sheffield |
| *Philosophy* | Professor B. A. O. WILLIAMS, Bedford College, University of London |
| *Chinese* | Mr. D. C. LAU, School of Oriental and African Studies, University of London |
| *Music* | Mr. R. MARCHANT, University of Hull |
| *History and Philosophy of Religion* | Professor H. D. LEWIS, King's College, University of London |
| *Old Testament History and Religion* | The Rev. Dr. N. H. SNAITH, Greenacres, Castle Lane, Thetford, Norfolk |
| *New Testament Language and Literature and Biblical and Historical Theology* | The Rev. P. J. THOMPSON, University of Hull |
| *Education* | Dr. J. E. NESBITT, University of Manchester, and another to be appointed |
| *Phonetics* | Professor N. C. SCOTT, School of Oriental and African Studies, University of London |
| *Fine Art* | Mr. A. MACLAREN YOUNG, University of Glasgow |
| *Physical Education* | Mr. A. R. MALCOLM, St. Catherine's College, University of Cambridge |

## *The Faculty of Economic and Social Studies*

| | |
|---|---|
| *Economics* | Professor C. R. ROSS, University of East Anglia |
| *Accountancy* | Mr. C. A. WHITTINGTON-SMITH, University of Sheffield |
| *Industrial Management* | Dr. M. DRYDEN, University of Edinburgh |
| *Industrial Relations* | Dr. N. S. ROSS, University of Birmingham |
| *Sociology* | Mrs. J. E. FLOUD, Nuffield College, University of Oxford |
| *Social Medicine* | Mrs. M. JEFFERYS, London School of Hygiene and Tropical Medicine, University of London |

## *The Faculty of Law*

| | |
|---|---|
| *Law* | Dr. A. R. N. CROSS, Magdalen College, University of Oxford |

## *The Faculty of Science*

| | |
|---|---|
| *Organic Chemistry* | Professor D. H. HEY, King's College, University of London |
| *Zoology* | Professor E. J. W. BARRINGTON, University of Nottingham |
| *Biophysics* | Professor J. DAINTY, University of East Anglia |

## *The Faculty of Technology*

| | |
|---|---|
| *Civil Engineering* | Professor A. W. HENDRY, University of Edinburgh |
| *Electrical Engineering* | Professor R. L. RUSSELL, University of Newcastle upon Tyne |
| *Ceramics* | Mr. L. R. BARRETT, Imperial College of Science and Technology, University of London |
| *Metallurgy* | Professor J. G. BALL, Imperial College of Science and Technology, University of London |
| *Applied Mineral Sciences* | Professor STACEY G. WARD, University of Birmingham |
| *Colour Chemistry* | Professor R. H. PETERS, Manchester College of Science and Technology |
| *Leather Science* | Ir. P. J. van VLIMMEREN, Lederinstitut T. N. O., Waalwijk, Holland |
| *Agriculture* | Mr. S. FOX, University of Reading |
| *Agricultural Bacteriology* | Dr. S. BAINES, West of Scotland Agricultural College, Glasgow |
| *Agricultural Botany* | Dr. H. REES, University College of Wales, Aberystwyth |
| *Agricultural Zoology* | Dr. P. W. E. MURPHY, School of Agriculture, Sutton Bonington, University of Nottingham |
| *Veterinary Science* | Mr. A. R. JENNINGS, School of Veterinary Medicine, University of Cambridge |

## *The Faculty of Medicine*

| | |
|---|---|
| *Anatomy* | Professor R. E. COUPLAND, Queen's College, Dundee |
| *Physiology* | Professor A. A. HARPER, University of Newcastle upon Tyne |
| *Biochemistry* | Mr. J. R. P. O'BRIEN, Pembroke College, University of Oxford |
| *Pharmacology* | Professor G. M. WILSON, University of Sheffield |
| *Pathology* | Professor R. I. N. GREAVES, Gonville and Caius College, University of Cambridge |
| *Bacteriology* | Professor C. P. BEATTIE, University of Sheffield |
| *Medicine* | Professor A. KEKWICK, Middlesex, Hospital Medical School, University of London |
| *Dermatology* | Dr. D. I. WILLIAMS, King's College Hospital Medical School, University of London |
| *Paediatrics and Child Health* | Professor A. G. WATKINS, The Welsh National School of Medicine, Cardiff |
| *Psychiatry* | Professor E. STENGEL, University of Sheffield |
| *Surgery* | Professor H. L. DUTHIE, University of Sheffield |

## EXTERNAL EXAMINERS

| | |
|---|---|
| *Obstetrics and Gynaecology* | Professor G. G. LENNON, University of Bristol |
| *Public Health* | Professor J. KNOWELDEN, University of Sheffield |
| *Forensic Medicine* | Dr. T. K. MARSHALL, Queen's University, Belfast |
| *Dental Subjects* | Mr. A. J. W. TURRELL, University of Sheffield and Professor A. S. PROPHET, University College Dental School, London, W.C.1 |

At the time of printing, external examiners for 1964-65 in the following subjects have not been appointed:

Aramaic and Syriac
French (1)
Italian
German
Russian
Spanish
Medieval History
Modern History
History and Philosophy of Science
Church History
Geography
Education (1)
Economic History
Social Anthropology
Government
Pure Mathematics
Applied Mathematics
Statistics
Electronic Computation
Physics
Inorganic Chemistry
Physical Chemistry
Botany
Geology
Psychology
Pharmacy
Mechanical Engineering
Mining
Gas Engineering and Fuel Science
Chemical Engineering
Applied Geophysics
Coal Preparation and Mineral Dressing
Textile Industries
Food Science
Agricultural Chemistry
Agricultural Economics

# REGULATIONS AND INFORMATION

## REGULATIONS CONCERNING QUALIFICATIONS AND PROCEDURE FOR ADMISSION

1. Students may be admitted to the University
(a) to read for degrees of the University
(b) to read for non-graduate qualifications of the University
(c) to attend courses of tuition not leading to a qualification of the University
(d) to pursue research not leading to a qualification of the University.

2. The classes and laboratories shall be open to men and women on the same terms.

3. Except in cases specially approved by the Vice-Chancellor, students must have reached the age of seventeen years before being admitted.

*Application*

4. All applicants for admission shall give a reference of whom inquiry may be made.

5. Applicants who are under the age of nineteen years and who have been in attendance at a school or other educational institution within one year of the date of their application must arrange for the headmaster or headmistress of the school or the head of the institution to provide a statement as to their suitability for admission.

6. Applicants from overseas may be required to produce certificates of identity.

7. Applicants whose native language is not English must provide evidence that they have a sufficient knowledge of both written and spoken English in accordance with the following paragraphs (a) and (b):

(a) Except with the special permission of the Vice-Chancellor, applicants for admission to a course leading to a first degree of the University must, before they can be admitted to the University, provide evidence that they have attained at least the pass mark in each of the following parts of the examination for the Certificate of Proficiency in English of the University of Cambridge:

Oral: dictation, reading and conversation
Written: (i) use of English
(ii) English language (composition and a passage of English with language questions).

(b) Applicants admitted to any other courses of study in the University may be required to undergo a test in English before the end of their first term. Students who fail to reach a satisfactory standard in this test will be required *either* to attend approved classes in English *or* to attend approved classes in English and other subjects during a year of study additional to the period required for a qualification of the University.

8. Applications for admission must be made on the appropriate forms.

9. (*a*) Applicants for admission to first degree and first diploma courses

(i) who are permanently resident in the United Kingdom must apply for admission through the Universities Central Council on Admissions, 29 Tavistock Square, London, W.C.1. The last date for the receipt of applications for admission at the beginning of a session is 15 December.

(ii) whose permanent home residence is outside the United Kingdom must apply through the Universities Central Council on Admissions, 29 Tavistock Square, London, W.C.1. The last date for the receipt of applications for admission at the beginning of a session is 31 March.

(*b*) Applicants for admission to other than first degree or first diploma courses must apply direct to the University.

(*c*) Applications received after the above dates may be considered if places are available.

*Matriculation*

10. Applicants for admission to read for the degree of Bachelor of the University must provide evidence of having satisfied the requirements of the Joint Matriculation Board of the Universities of Manchester, Liverpool, Leeds, Sheffield and Birmingham. Particulars of the requirements may be obtained from the Secretary of the Board, Manchester 15.

11. The University imposes certain additional requirements with respect to admission to read for degrees in certain Faculties and departments. These requirements are listed in the appropriate Faculty or departmental prospectus, copies of which may be obtained from the Registrar.

*Registration*

12. Students, and applicants accepted for admission, must comply with such directions as are given to them by their head of department and the Registrar concerning registration. Registration is in two forms:

(a) The October Registration

(i) All students will be required to register at the beginning of the session; the dates for session 1964-65 will be:

Monday, 5 October, 1964
Tuesday, 6 October, 1964

Students will be informed individually of the times at which they should attend.

(ii) Before registration all students must sign a declaration that they will observe the Statutes, Ordinances and regulations of the University for the time being in force. Ordinances and regulations governing the award of degrees and diplomas may be revised from time to time. Students who have started a course will either continue it under the old provisions or be given the opportunity of changing to the new provisions. The arrangements in each instance are specified in the appropriate place in the *Calendar*.

(iii) The Deans and Sub-Deans of the Faculties, the tutor of women students and heads of departments and their staffs will be present to advise students on their schemes of study. Women students must consult the tutor of women students with regard to their schemes of study and all students must obtain approval of the courses which they wish to pursue.

(iv) Students will then be registered as students of the University provided that they pay the appropriate fees to the office of the Bursar, or offer evidence satisfactory to the Bursar that they are holders of an award which includes payment of fees.

(v) Except with the special permission of the Vice-Chancellor, students may not attend any lecture, laboratory or other class until they have received a registration certificate which must be presented on request to the head of the department concerned before beginning any course of study.

(b) The June Registration

Students already in attendance at the University will receive in June forms of provisional registration which, subject to satisfactory academic performance and to the approval of their head of department, will enable them to be given any necessary academic authority to proceed to the next stage of their scheme of study at the beginning of the following session. Such students will be required to attend a short registration in October.

# GENERAL REGULATIONS

1. *Of residence*

(a) Except as provided below, all students in full-time attendance are required to comply with the following requirements:

(i) Students who are in their first year of study in the University and who are below the age of 21 years must live with their parents or with relatives or friends of their families or in a University hall of residence or flat or in a hostel or in lodgings registered with the lodgings warden. Such students below the age of 21 years may only live in a University flat with their parents' consent, sent in writing to the lodgings warden.

(ii) Students who are in their second or later years of study or who are aged 21 years or over must live with their parents or with relatives or friends of their families or in a University hall of residence or flat or in a hostel or in lodgings registered with the lodgings warden or alternatively in a privately owned flat so registered.

(iii) Students in registered lodgings may transfer to a flat only with the permission of the lodgings warden and, for those under 21, with their parents' consent, sent in writing to the lodgings warden; the move from lodgings to a privately owned flat may normally be made only after the end of a term, and application to transfer must normally be made at least two weeks before the end of term.

(iv) Lodgings or privately owned flats must be registered with the lodgings warden before students take up residence in them or enter any contract to do so.

(b) The following students are exempted from these requirements (see however (c) below for students in the department of education):

(i) Students who have obtained a first degree,
(ii) Students who have obtained a diploma of this University,
(iii) Students who have passed 2nd M.B., Ch.B., or 2nd B.Ch.D. or an equivalent examination,
(iv) Students who are married,
(v) Students who have obtained special permission to make alternative arrangements about accommodation.

(c) Students in the department of education who are in receipt of a grant as recognised students in training must live in accommodation which is registered with the lodgings warden.

(d) Any students in the University may apply to the lodgings wardens for advice and help in finding accommodation.

All enquiries about lodgings should be made to:

For men: the lodgings warden, Miss Carol P. Abell, B.Com., The University, Leeds, 2.

For women: the warden of women students in lodgings, Mrs. W. A. Sledge, B.A., The University, Leeds, 2.

2. *Of keeping terms*

Students shall enter punctually at the beginning of each term. Students who do not so enter may be refused permission to keep the term. Where delay in entering is due to illness or other unavoidable cause, a communication must be made to the Registrar. In cases of illness the communication should be accompanied by a medical certificate.

3. *Of attendance*

Students shall attend the courses of lectures, laboratory work, tutorial periods and examinations prescribed in their schemes of study, together with such other lectures, classes or examinations as may be directed, regularly, punctually and in an orderly manner.

Persistent neglect of work, repeated failure in examinations or unreasonable delay in presentation for examination may result in a student being required to withdraw from the University.

4. *Of progress procedure*

A clear indication will be given to each student at the outset of his course that unless there are special circumstances affecting his progress he will be expected to fulfil the University's examination requirements within the normal time.

Warnings, not necessarily in writing, may be given to students at any time by heads of departments, Deans, Sub-Deans or the Tutor of Women Students that failure to improve the standard of their work may lead to their course of study being terminated.

A student may be required to terminate his course, after consideration of his examination results, without previously having been warned.

5. *Of absence*

Students who are absent through illness or other sufficient cause shall send a written explanation at once to the Registrar who will inform those concerned.

Students who desire leave of absence shall obtain the permission of the Vice-Chancellor.

6. *Of Jewish holy days*

Students who, for religious reasons, are unable to carry out their University work or examinations on Saturdays and Jewish holy days shall give notice of this fact in writing to the Registrar not later than 1 November each session.

It is the responsibility of such students to inform themselves concerning the work which has been done in classes from which they have been absent and to take appropriate action.

Every effort will be made to avoid arranging examinations on Saturdays and Jewish holy days for those students who have informed the Registrar as required above, but the University reserves the right to hold examinations on such days if no alternative time is convenient.

7. *Of addresses*

Students shall inform the Registrar of their addresses. Changes of address must be communicated without delay.

8. *Of dismissal*

Students who are dismissed for idleness or misconduct will forfeit all fees and privileges.

9. *Of damage*

Students shall replace or repair at their own expense apparatus or other property of the University which may have been destroyed or damaged by their fault.

10. *Of damage to property in charge of the University Union*

Students who damage property in the charge of the University Union may be fined by the appropriate committee of the Union. An appeal against any decision of the University Union may be made to the Vice-Chancellor.

11. *Of publication*

Except with the special permission of the head of the department concerned, students shall not publish the results of research done by them in the University or any matters given in the lectures or other tutorial classes.

12. *Of study during the vacations*

Students qualified to carry out independent work may be permitted to use the laboratories which may be opened for this purpose during parts of the vacations. Such students shall pay a fee and shall apply for admission to the laboratories to the heads of the departments concerned with whom shall rest the decision as to their suitability for admission.

13. *Of precautions against ionising radiations*

No person shall undertake work in the University with ionising radiations or with material which produces significant amounts of ionising radiation except with the approval of the head of the department concerned; and any person who undertakes such work, or who may, for other reasons, be subject to ionising radiations in the University, must co-operate and participate in the application of any scheme of monitoring or testing which the Radiation Protection Officer may require, and must attend such course of instruction as the head of department may require.

14. *Of academic dress*

Academic dress shall be defined in three ways as follows:

Academic undress: a black gown.

Academic dress:

Bachelors: black Bachelor's gown with appropriate hood
Masters: black Master's gown with appropriate hood
Doctors: black Master's gown with appropriate Doctor's hood.

Full academic dress:

Bachelors: black Bachelor's gown with appropriate hood and cap
Masters: black Master's gown with appropriate hood and cap
Doctors: appropriate Doctor's gown and cap without hood except where the gown is not faced with the distinctive colour of the doctorate, in which case the hood will also be worn.

All hoods shall be of the single or Oxford pattern, and the hoods of Bachelors shall be lined. The colours of hoods appropriate to graduates of the University shall be as follows:

Bachelors of Arts: dark green
Bachelors of Music: dark green with a one-inch band of white silk laid on the outside
Bachelors of Divinity: dark green with white lining and band and with one inch of scarlet laid on the white silk
Bachelors of Commerce: light green lined with dark green
Bachelors of Laws: light green
Bachelors of Science: middle green
Bachelors of Medicine and Bachelors of Surgery: dark green lined with light green
Bachelors of Dental Surgery: dark green lined with middle green
Masters of Arts: dark green with white lining
Masters of Education: dark green with white lining and band and with one inch of middle green laid on the white silk
Masters of Commerce: light green with white lining and band and one inch of dark green laid on the white silk
Masters of Laws: light green with white lining
Masters of Science: middle green with white lining
Masters of Surgery: dark green with white lining and edged with light green
Masters of Dental Surgery: dark green lined with white and edged with middle green
Doctors of Philosophy: green lined with green with narrow bindings of scarlet
Doctors of Divinity: scarlet lined with dark green with white bindings
Doctors of Music: scarlet lined with dark green and having a one-inch band of white watered silk laid on the green one inch from the edge
Doctors of Letters, Laws, Science and Medicine: scarlet lined with green of the shade or shades appropriate to the Faculty.

The colours of gowns appropriate to graduates and licentiates of the University shall be as follows:

Licentiates in dental surgery: black with facings and yoke of middle green with sleeves of elbow length bordered with green outside and white inside
Bachelors and Masters in all Faculties: black
Doctors of Philosophy: green with sleeve linings of green and facings of green bound with scarlet
Doctors of Divinity: scarlet with sleeve linings of dark green and facings of white
Doctors of Music: scarlet with sleeve linings and facings of dark green with a one-inch band of white watered silk laid on the green one inch from the outside edge
Doctors of Letters, Laws, Science and Medicine: scarlet with facings and sleeve linings of the shade of green appropriate to the faculty.

The caps of licentiates, Bachelors and Masters [both men and women] shall be of the usual hard square pattern.

The caps of Doctors of Philosophy shall be of black velvet of the usual pattern.

The caps of Doctors of Letters, Divinity, Music, Laws, Science and Medicine shall be of black velvet of the usual pattern with a gold cord and a lining of the shade of green appropriate to the Faculty.

Undergraduates of the University may wear black gowns.

The robe makers to the University by appointment shall be Messrs. Ede and Ravenscroft of 93 and 94 Chancery Lane, London, W.C.2. Representatives attend at Congregations of the University in order to robe persons who are to be presented for degrees.

15. *Of the arms of the University*

The arms of the University shall be 'Vert an open book proper edged and clasped gold inscribed with the words *Et augebitur scientia* between in chief three mullets argent and in base a rose of the last seeded proper. The crest shall be on a wreath of the colours a Greek sphinx sejant gules'.

# REGULATIONS CONCERNING EXAMINATIONS

1. *Matriculation examinations*

Examinations for matriculation are conducted by the Joint Matriculation Board of the Universities of Manchester, Liverpool, Leeds, Sheffield and Birmingham.

Correspondence should be addressed to the Secretary, The Joint Matriculation Board, Manchester 15, from whom full particulars may be obtained.

2. *Departmental examinations*

Departmental examinations may be held at times and on conditions determined by the heads of the departments concerned.

All students reading for degrees are required to present themselves for the departmental examinations in their subjects of study. Students who fail in these examinations may be required to repeat their courses of study.

3. *Degree examinations*

The examinations will ordinarily be held in June each year but certain supplementary examinations will also be held in September. The conditions under which candidates may be accepted for supplementary examinations are defined in the ordinances and regulations governing degrees.

Candidates will be required to present themselves for the degree examinations in each subject at the end of the session in which they have completed the course of study in that subject unless they have obtained the permission of the Board of the Faculty concerned to defer the examination.

4. *Admission to examinations*

All students are required to apply for admission to degree and departmental examinations and to pay any appropriate fees for re-examination.

Applications for admission to examinations must, in all cases, be made to the Registrar on the appropriate form. Applications for examination in any subject will be accepted only from students who have regularly attended the prescribed courses of study and performed the work of the classes to the satisfaction of the head of department concerned and provided they are received before the last dates of entry for the examinations concerned as published in the University almanac.

5. *Blind or partially-sighted candidates*

Special arrangements will be made, on application to the Registrar, for persons registered as blind or partially-sighted who are candidates for University examinations.

The case of each candidate will be considered separately but for working his papers each candidate will be allowed extra time. This will be at least ten minutes in each hour and in mathematics papers at least twenty minutes in each hour.

6. *Conduct of examinations*

Candidates whose applications for admission to degree examinations have been accepted will receive an acknowledgement of their entry together with a copy of the regulations and information concerning the publication of the time-table. It is the responsibility of the candidates to ascertain the time and place of each examination they are taking.

Candidates should consult the lists posted on the doors of the examination rooms in order to ascertain the numbers of their places.

Results of examinations will be published as soon as possible after they have been approved by the Senate.

Congregations for the conferment of degrees will be held in March, September and December and after the end of the third term in each session.

# GENERAL INFORMATION

1. *Scholarships, studentships, fellowships and prizes*

The University offers a number of entrance and senior scholarships, graduate studentships, and fellowships and prizes of which particulars will be found in the section Scholarships, Fellowships and Prizes.

Scholarships and other awards tenable at the University are also offered by local authorities including the council of the City of Leeds and the county councils of the North, East and West Ridings of Yorkshire. Information may be obtained from the chief education officer of the authority concerned and from:

Leeds City Council: the Chief Education Officer (higher section), Education Offices, Calverley Street, Leeds 1.

West Riding County Council: the Chief Education Officer, Education Department, County Hall, Wakefield.

North Riding County Council: the Secretary, Education Office, County Hall, Northallerton.

East Riding County Council: the Chief Education Officer, East Riding County Council, Beverley.

2. *Financial grants to students*

Financial grants or loans may be made to students by the University from specially established funds of which particulars will be found in the prospectus Scholarships and Fellowships.

Grants or loans may also be made by local authorities and other bodies.

3. *Residence*

The University has a number of halls of residence for men and women students respectively as well as lists of registered lodgings administered by the lodgings warden in the case of men students and by the warden of women students in lodgings.

The halls of residence for men are:

Devonshire Hall: Warden, Mr. W. Belfield, M.Sc., Ph.D.

Lyddon Hall: Warden, Mr. R. E. Morgan, B.A.

Sadler Hall: Warden, Mr. E. A. Kirkby, B.Sc.

Bodington Hall: Wardens,
Mr. A. J. Gurr, M.A., Ph.D.
Mr. A. J. Kenny, M.B., B.Sc., Ph.D.
Mr. B. A. Kilby, M.A., Ph.D.
Mr. R. D. Mackey, B.Sc., Ph.D., A.M.I.C.E., F.G.S.
Mr. A. A. Marsh, B.Sc., Dip.Agric.Econ.
Mr. G. F. Rainnie, M.A.
Mr. P. J. Schofield, B.A., M.A., LL.B.
Mr. J. L. Woodhead, M.A.

The halls of residence for women are:

Oxley Hall: Warden, Miss J. M. A. Stott, *O.B.E.*, M.A.

Weetwood Hall: Warden, Miss M. B. Carey, LL.B., J.P.
Lupton Hall: Warden, Miss I. Werth, M.A.
Tetley Hall: Warden, Miss E. M. McAlpine, M.A.
Ellerslie Hall: Warden, Miss V. N. R. McCririck, M.A., L.R.A.M.

Further particulars of the halls of residence may be obtained from the Registrar.

Men students who do not live in a hall of residence are strongly advised to apply to the lodgings warden in the first instance for accommodation in registered lodgings.

Any woman student requiring accommodation in registered lodgings should consult the warden of women students in lodgings who will help her to obtain suitable accommodation.

4. *The University Union*

Membership of the University Union is obligatory upon all students reading for degrees and also, except in special circumstances to be determined by the Vice-Chancellor, upon all students attending the University for more than six hours a week. The University Union comprises all recognised athletics clubs and a wide range of societies. Membership entitles students to the use of the Union building, to free instruction in the University gymnasium and facilities for various sports and athletics.

Students who have paid a fee which does not include the Union fee may join the Union on payment of a subscription of £7 a session. If attendance is for part of a session only the fee will be £2 10s. a term.

Life membership granted before 1 August, 1957, requires the payment of five annual subscriptions or the equivalent thereof, and no further annual subscriptions will be required from such life members unless they take part in games or athletic sports (see below).

Life membership granted on or after 1 August, 1957, requires the payment of a minimum of five annual subscriptions and no student who is not a life member before 1 August, 1957, may become a life member until he ceases to be a registered student. Students who have not paid five annual subscriptions on going down but who have attended for not less than two years in the case of undergraduates or one year in the case of postgraduates will qualify for life membership on paying the balance of five annual subscriptions. Students who have paid five or more subscriptions may, on application to the Union, become life members on ceasing to be registered students. Life membership granted on or after 1 August, 1957, in accordance with this paragraph, requires payment of the full Union annual subscription for the time being in force should such a life member later return to the University to read for a degree or, except in special cases to be determined by the Vice-Chancellor, to attend the University for more than six hours a week.

Life members shall not take part in games or athletic sports unless they pay an annual fee of £1 1s.

Members of the Court, the Council, academic and senior administrative staff and friends of the University, may, by sanction of the Union committee, be admitted to honorary membership of the Union at a fee of £1 1s. per annum. The fee for honorary life membership is £5 5s.

Associate members, being life members of other university unions, will be required to pay an annual fee of £3 unless they are taking a full-time course at the University or, except in special cases to be determined by the Vice-Chancellor, attending the University for more than six hours a week when the full annual subscriptions will be payable.

5. *Designated ministers of religion*

The following ministers of religion have been designated by their respective communities to give help and guidance to those of their community who are members of the University:

Baptist Church
The Rev. H. Harvey, M.A., 4 Caythorpe Road, Leeds 16. Telephone: Leeds 5-1129.

Church of England
The Rev. G. W. Burningham, B.A., M.A., 74 Clarendon Road, Leeds 2. Telephone: Leeds 2-4840.
Assistants: The Rev. J. N. Satterthwaite, B.A., 1 Grange Court, Leeds 6. Telephone: Leeds 5-3816.
Sister Jean Francesca, C.H.R., St. Saviour's Vicarage, Ellerby Road, Leeds 9. Telephone: Leeds 25567.

Congregational Church
The Rev. L. C. Green, M.A., B.D., Ph.D., 3 Ashwood Terrace, Leeds 6. Telephone: Leeds 5-2528.

Methodist Church
The Rev. J. Banks, M.A., 'North Field', 167 Otley Road, Leeds 6. Telephone: Leeds 5-2323

Presbyterian Church
The Rev. A. S. Cooper, B.A., M.A., 3 The Ring Road, West Park, Leeds 16. Telephone: Leeds 56608.

Roman Catholic Church
The Rev. H. V. McAtamney, S.J., 25 Clarendon Place, Leeds 2. Telephone: Leeds 2-7421.

Unitarian Church
The Rev. B. L. Golland, M.A., 8, Woodbourne Avenue, Leeds 17. Telephone: Leeds 685916.

United Hebrew Congregation
The Senior Rabbi, United Hebrew Congregation, Brandsby Lodge, 98 Chapeltown Road, Leeds 7. Telephone: Leeds 685320.

6. *Physical education*

The University provides extensive facilities for physical education of which students are strongly advised to take advantage. There are opportunities for participation in a wide variety of recreative physical activities including team games, swimming, mountaineering, various forms of dancing, gymnastics and

indoor games. Provision is also made for developmental physical training.

The gymnasia are open to all members of the University Union except when reserved for students taking special courses of study.

Students are advised to consult the staff of the department of physical education, in the Physical Education Centre near the University Union, during the registration days.

7. *Student health*

In order to avail themselves of the provisions of the National Health Service, students living away from their homes during the University terms are advised to register with a doctor in Leeds for the period of their University course. Students have free choice of doctor, and advice on this matter can be obtained at the time of registration from the Secretary of the Student Health Service, or from the Clerk, the Leeds Executive Council of the National Health Service, 7 Boar Lane, Leeds 1. Students may, if they wish, register with the University Medical Officers. They will need to produce their National Health Service medical cards for the purpose of medical registration.

Students will be expected to obtain their treatment from the doctor with whom they are registered.

The department of student health undertakes a preliminary medical examination of all students during their first week at the University and further examinations when necessary later in the session and during their second and subsequent years. All students on entry are required to undergo a chest X-ray examination by the mass radiography unit unless exemption is obtained. Vaccination against tuberculosis, tetanus and poliomyelitis is offered to all students.

Students may consult the University medical officer about problems of health and a sick bay is provided to which students may be admitted when ill and in which, during convalescence, it is possible in some cases for them to continue their studies.

8. *University radiation protection service*

The university radiation protection service provides the health physics services required in the University for persons working with or otherwise exposed to ionising radiations or radioactive materials. Persons who are to work regularly with ionising radiation have an initial general medical and haematological examination and are subsequently monitored for exposure by personal film-badge dosimeters where appropriate, and by regular blood counts. Courses of lectures on the biological effects of radiations and the precautions to be taken when working with radiation are provided for both undergraduate and postgraduate students. *See* also General Regulation 13, on page 245.

9. *Military education*

The University provides facilities for military education through the Universty Officers Training Corps (T.A.) [which was formed at the University in July, 1909), by attachment to the Women's Royal Army Corps, and by the University Air Squadron. Information about service with the Royal Navy and the Royal Naval Volunteer Reserve may be obtained from the

Naval Liaison Officer, Lieut-Commander C. W. Buckley, 30 Gledhow Wood Grove, Leeds 8.

Officers Training Corps (T.A.)

Honorary Colonel: Her Royal Highness, The Princess Royal, *C.I.*, *G.C.V.O.*, *G.B.E.* (Chancellor of the University)
Commanding Officer: Lt.-Col. J. A. Northover, R.A.S.C.
Adjutant: Capt. K. J. Hill, Royal Tank Regt.

The aim of the Corps is to train undergraduates for commissioned service in both the Regular and Reserve Army. Membership of the Corps is voluntary and training is arranged so as not to interfere with academic studies.

Obligatory training consists of fifteen days Annual Camp and forty hours training during the year. In addition, officer cadets may attend parades and weekend camps in term time, and courses/attachments to Regular Army units during vacations.

Officer cadets receive normal Army pay and allowances, besides travelling expenses or free warrants. Uniform and equipment is provided free. An annual bounty is also paid to each officer cadet on completion of his obligatory training.

Further information may be obtained from O.T.C. Headquarters at 41 University Road, Leeds 2. Telephone: Leeds 23560.

10. *The appointments board*

The main aim of the appointments board is to help students and graduates to obtain suitable employment and to give information and advice about posts in the professions (including teaching), the Civil Service, industry and commerce. Students who wish to use the services of the board to obtain permanent posts should register with the board and arrange an interview with the secretary or with one of the assistant secretaries, at the beginning of their final year. First- and second-year science and technology students, who are advised by their departments to obtain suitable practical experience during long vacations, are welcome to use the board's services.

The secretaries will also be glad to see any first- or second-year students in the arts group of subjects who would like to have preliminary discussions about their career plans, and wish to encourage such students to visit the office during the second or third terms of the session.

The board has an extensive careers library with information about firms and other employers, which may be consulted by students and graduates.

11. *The warden of overseas students*

To help students from overseas to take the fullest advantage of their stay in England, the University has appointed a warden of overseas students. This appointment is at present held by Mr. A. Laing, senior lecturer in education. He will be pleased to advise overseas students on any matters they may bring to him.

The warden's rooms are at 28 Blenheim Terrace, Woodhouse Lane, Leeds 2, directly opposite the main building of the University.

12. *University House*

*University House* accommodates the Senior Common Room (on the first floor), the refectory (on the ground floor) and the coffee lounge (on the lower ground floor).

The Senior Common Room is a club for members of the academic, senior library and senior administrative staffs. Its premises include dining rooms, common rooms, a library, bar and recreational rooms. Morning coffee and teas are served and luncheon between 12 noon and 2 p.m. and dinners and suppers between 6.30 p.m. and 7 p.m.

Some of the rooms may be reserved by members for private functions. Application should be made to the manageress.

The hours of opening and the rules of the club are posted in the entrance hall.

The refectory, which is open to members of all staffs and students, provides, from Monday to Friday, lunches from 11.45 a.m. to 2 p.m., and high teas from 4.30 p.m. to 6.30 p.m. Lunches on Saturday are served from 12 noon to 1 p.m. Vacation openings will be posted on the notice board in the refectory.

The main dining rooms operate on the self-service system and a waitress service is available in a smaller dining room at a slightly higher price.

Special arrangements for private functions in the refectory must be made with the chief catering officer. The accommodation may be available for reservation from 3.30 p.m. to 5.30 p.m. and from 7 p.m. to 10.30 p.m. Tea, supper or dinner may be provided for specified numbers.

The coffee lounge is also open to members of all staffs and students and provides light refreshments between 10 a.m. and 5.30 p.m. on weekdays and from 10 a.m. to 12.30 p.m. on Saturdays. Special arrangements for evening catering may be made with the chief catering officer.

13. *Cloakroom accommodation*

Lockers may be hired in the Parkinson Building, the School of Medicine and the School of Dentistry on application to the porters' office in the building concerned. Lockers may also be hired on the lower ground floor of University House on application to the porters' office in the University Union.

14. *Commonwealth Universities Yearbook*

The Commonwealth Universities Yearbook is published annually in April and contains in its 2,000 pages general information and complete staff lists for all universities in the United Kingdom and other Commonwealth countries. Authoritative introductions precede the pages for Australia, Canada, India, New Zealand, Nigeria, Pakistan and the United Kingdom, and appendices contain full entries for the universities of the Republics of Ireland and South Africa, an extended summary of the admission requirements of universities in Australia, Canada, New Zealand and the United Kingdom, and a section on the Commonwealth Scholarship and Fellowship Plan. There is a short bibliography, a general subject index and an index of 60,000 names. Copies may be obtained from the Association of Commonwealth Universities, 36 Gordon Square, London, W.C.1. The book costs £5 5s. but the staff of the University of Leeds

and other universities which are members of the Association may obtain copies direct from the Association at the reduced price of £3 10s. (plus 3s. 6d. postage and packing charge).

15. *University publications*

The *Calendar* is published annually in October and may be obtained from the Registrar, price 15s. plus postage. Copies may be consulted in the Library and in the University Union.

Copies of the *Register of Graduates*, a list giving the names of all persons who have graduated in the University from its foundation until July, 1960, together with the degrees (including honorary and *ad eundem* degrees) which have been conferred upon them, may be obtained from the Registrar, price 12s. 6d. (limp cloth), 15s. (uniform with the *Calendar*). Editions of the complete register will be published every fifth year only. For the intervening years, editions of the *Calendar* will contain cumulative lists of graduates in supplementation of the latest complete register.

The following prospectuses are available, price 6d. post free unless otherwise stated:

*General Regulations* } free
*Fees* }
*Scholarships and Fellowships*
*The Faculty of Arts*
*The Faculty of Economic and Social Studies*
*The Faculty of Law*
*The Faculty of Science*
*University Studies in Pure Science*
*The School of Medicine*
*The School of Dentistry*
*The Department of Education*
*Civil, Mechanical and Electrical Engineering*
*The Houldsworth School of Applied Science* (comprising departments of gas engineering and general fuel science with ceramics, metallurgy and chemical engineering)
*Applied Mineral Sciences*
*Department of Textile Industries*
*Department of Colour Chemistry and Dyeing*
*The Procter Department of Food and Leather Science*
*Agriculture*
*Residence for Women Students*
*Residence for Men Students*

Copies of the *University Gazette* may be obtained from the porters' offices and from the office of the clerk to the University Union, price 6d. each.

A list of publications by members of the University and of titles of theses accepted for higher degrees is published annually. Copies of the lists for the academic years 1938-50, 1950-1, 1952-3, 1953-4, 1954-5, 1955-6, 1956-7, 1957-8, 1958-9, 1960-1 and 1961-2 are available, price 2s. 6d. each.

# THE LIBRARY

## INTRODUCTORY

The University library contains the following constituent parts:

1. The Brotherton library
2. The agricultural library
3. The textile library
4. The medical library
5. The dental library
6. The Institute of Education library
7. The law library
8. Departmental libraries.

Apart from the Brotherton Collection, it contains 682,205 volumes and pamphlets and has been most fortunate in receiving many valuable gifts. It is deeply indebted to many donors, individual and corporate, for regular contributions in money and books.

The Brotherton library, built by the generous gift of Lord Brotherton of Wakefield, contains the great majority of the books in arts and science and, in particular, the valuable Brotherton Collection, the private library of Lord Brotherton which, in accordance with his wishes, was presented to the University in 1935 by Mr. Charles Brotherton and Mrs. Dorothy Una McGrigor Phillips. The Collection contains 45,599 volumes and pamphlets, 1,184 manuscripts, 4,106 deeds and 34,648 letters.

The medical library which is situated in the School of Medicine consists of 40,741 volumes and pamphlets. The valuable collection of the Leeds and West Riding Medico-Chirurgical Society was presented to the University in 1926, and the Society continues to make an annual contribution towards the maintenance of the library. The historical section is rich in medical classics which belonged originally to the library of the old Infirmary and were presented with that library to the School of Medicine in 1865. A prominent feature of the library is the extensive collection of periodicals.

## SPECIAL COLLECTIONS

The Brotherton Collection includes medieval manuscripts, 252 incunabula, a large number of other early printed books, the four Folios of Shakespeare, some hundreds of Civil War and other seventeenth-century political pamphlets, and numerous seventeenth- and eighteenth-century plays and poems. Lord Brotherton acquired the early printed books collected by Lord Howard de Walden with their elaborate modern bindings. The strongest section of the Collection is in nineteenth-century English literature, especially in such authors as the Brontës, Browning, Byron, Cobbett, William Morris, Sir Walter Scott, Shelley, Swinburne and Tennyson. The letters include the whole of the correspondence of Sir Edmund Gosse from such persons as Lord Haldane, Thomas Hardy, Henry James, Lord Balfour, Austin Dobson, Oliver Wendell Holmes, and very many others. The Bram Stoker letters also number many

thousands. The French section includes the manuscripts of D'Eon de Beaumont, and letters written to Victor Hugo by Juliette Drouet. There are extensive music and Yorkshire sections and also the late Alf Mattison's books and manuscripts on the history of the Labour Party. In 1950 Mrs. McGrigor Phillips presented her distinguished collection of Romany literature, comprising over 650 books and pamphlets, together with music, letters, manuscripts, pictures, etc.; she is continuing to develop this collection, and has been appointed by the University its Honorary Curator. A notable collection of books, manuscripts, letters and other documents relating to members of the family of Vincent Novello and especially to Charles and Mary Cowden Clarke (née Novello) was received in 1954, the gift of Donna Nerina Medici di Marignano Gigliucci and Contessa Bona Gigliucci.

Among the other valuable special collections in the Brotherton library are the Icelandic collection of 12,511 volumes and pamphlets formed by Mr. Bogi Melsted and since augmented by many gifts from Iceland; the library presented by the Leeds Philosophical and Literary Society to the University in 1936; the Library presented by the Yorkshire Geological Society in 1956; the Anglo-French collection of 3,000 volumes on the influence of Great Britain over France, mainly translations into French from English before the nineteenth century; the Blanche Leigh collection of 1,300 books on cookery and household management, including Babylonian tablets and many early printed books; the John F. Preston collection of some 650 English cookery books; the Chaston Chapman collection of 1,116 books on the history of science, including many early works on alchemy; the All Souls gift of 2,294 volumes of early science and theology; the Harold Whitaker collection of about 450 county atlases and maps of the British Isles; the Roberts gift of books on contemporary fine art and fine printing; the Ogden collection of Babylonian and Assyrian tablets and other relics and books on fine art and Biblical studies; books on nineteenth-century travel and topography from Ripon Cathedral; the Adar Mitrecey books on magic; a long series of French cartularies; the C. F. Tetley mountaineering books; the very complete Denison Roebuck collection of British postage stamps; and many other gifts.

## REGULATIONS

### FOR THE BROTHERTON LIBRARY

1. *Hours of opening*

The library is open

(a) from 9 a.m. to 10 p.m. on Monday to Friday and from 9 a.m. to 1 p.m. on Saturday during the first and second terms and during the third term until the close of written examinations;

(b) from 9 a.m. to 9 p.m. on Monday to Friday and from 9 a.m. to 1 p.m. on Saturday during the Christmas and the Easter vacations, and between the close of written examinations and the beginning of the last fortnight of the third term;

(c) from 9 a.m. to 5 p.m. on Monday to Friday and from 9 a.m. to 12.30 p.m. on Saturday during the long vacation and the last fortnight of the third term.

It is closed from 23 December at 5 p.m. up to and including 30 December; from Maundy Thursday at 5 p.m. up to and including Easter Tuesday; on Whit Monday and Tuesday; and on August Bank Holiday Saturday, Monday and Tuesday.

2. *Admission*

(a) Members of the Court, emeritus professors, members of the teaching, research and administrative staff, associates of the Yorkshire College, graduates, diplomates who have pursued a course of full-time study for not less than three years and registered students of the University, together with any others who are, or who have privileges as, members of the University, are entitled to the use of the library subject to the following regulations.

(b) Other persons may be allowed by the Librarian to read in the library on stating the subject of their studies and on producing a satisfactory recommendation. In special cases and on payment of 10s. for twelve months they may also be allowed to borrow books.

(c) Members of an institution who are accorded the use of the library in virtue of an agreement between the institution and the University shall conform to the regulations of the library subject to such modifications as may be stipulated in the terms of the agreement.

3. *Discipline*

(a) Silence shall be observed in the library.

(b) Smoking in any part of the library is forbidden.

(c) No bag, attaché case or parcel shall be brought into the library.

(d) All books taken out of the library shall be checked by the attendant at the exit.

(e) No reader shall write in or otherwise mark books belonging to the library; and any damage to, or loss of, books shall be made good to the satisfaction of the Librarian.

(f) The Librarian has power to suspend the library privileges of any person who infringes the regulations, and shall report any such suspension to the library committee.

4. *Borrowing in general*

(a) No book shall be removed from the library unless the borrower shall have first filled in the form provided. The form will be returned to the borrower as a receipt for the book returned, and the borrower shall be responsible for the book so long as the form remains in the library uncancelled.

(b) All books may normally be borrowed, with the exception of works of reference and books of special value or rarity which may not be removed from the library without the authority of the Librarian.

(c) Abstracting and bibliographical periodicals, current parts of other periodicals, and certain copies [marked with a blue label] of books in exceptional demand may only be borrowed overnight or for the week-end or for

any other period during which the library is closed. They will be issued not more than two hours before closing time on the days when the library is open until 10 p.m. and not more than one hour before closing time on all other days on the understanding that they will be returned not later than an hour after the next re-opening. Other books in much demand may be borrowed subject to return on the following day, or may be issued for such other limited periods as the Librarian may deem advisable. Failure to comply with the provisions of this rule will incur a fine of 6d. in respect of each day or portion of a day by which the return of a book is overdue.

(d) Theses of the University, with certain exceptions, may, with the consent of the Librarian, be consulted or borrowed.

(e) Books may not be taken abroad without the special permission of the Librarian.

(f) No person shall borrow a book from the library if he has in his possession any book which he has kept beyond the time allowed by the regulations, or if any fine or charge which he has incurred has not been paid.

(g) The Librarian may withhold or restrict the circulation of any book in the library.

(h) The Librarian is permitted to grant special facilities during a limited time to any person entitled to the use of the library.

5. *Borrowing by staff and research students*

(a) Members of the teaching and research, and senior members of the administrative and library staff shall be entitled to have at one time not more than twenty-five books borrowed from the library, unless this number is increased by the special permission of the Librarian. Books may be retained until a notice is received from the Librarian that they are overdue, in which case they shall be returned to the library without delay. A book shall be regarded as overdue when it has been in the possession of the borrower for a fortnight and is required by another person.

(b) Postgraduate research students shall have the same privileges and be subject to the same regulations in respect of borrowing from the library as members of the staff, except that they may not have at one time more than ten books borrowed from the library.

6. *Borrowing by others*

(a) Except by special permission of the Librarian, the number of books which may be held on loan at any one time by borrowers other than those specified in rule 5 above shall be limited to four books during term and five books during a vacation. Students in the department of music may, however, borrow in addition up to two music scores.

(b) Subject to the exception stated in rule 6(c) every book shall be returned to the library on or before the fourteenth day following that on which it was taken out; provided that a book may be renewed for one further period of a fortnight unless it is required by another person. Application for renewal may be made personally or by post. Further renewals are allowed only with the special permission of the Librarian.

(c) Books taken out at the beginning of, or during, vacations may be retained not later than the seventh day of the ensuing term; provided that any book required by another person may be recalled by the Librarian after it has been in the possession of the borrower for a fortnight and shall then be returned without delay. It shall be regarded as overdue if not returned within seven days of being recalled.

(d) Failure to return books under rules 6(b) and 6(c) shall entail a fine of 1d. in respect of each day or portion of a day by which the return of a book is overdue.

7. *Annual inspection*

All books shall be returned to the library by 5 p.m. on the Friday in the third week before the end of the third term. The issue of books will be suspended during the inspection, but will be resumed not later than the following Monday week. Failure to return books under this rule shall involve a fine of 2d. in respect of each day or portion of a day by which the return of a book is overdue.

8. *Inter-library loans*

Books borrowed from other libraries are subject in each case to the conditions imposed by the lending library. If they are required for home reading, this fact must be mentioned in the application. The cost of postage is normally charged to the applicant, but will be paid by the library on behalf of students whose applications are recommended by the head of a department.

9. *Special collections*

Admission to the rooms on the lower ground floor which contain special collections will be given to members of the teaching, research and senior administrative staff upon application to the Librarian, and may also be given to such students and other persons as seem to the Librarian able to make good use of the privilege.

## FOR THE BROTHERTON COLLECTION

*General conditions affecting access to the Brotherton Collection rooms*

1. The rooms containing the Brotherton Collection are reserved exclusively for the purposes of the Collection and for persons having the right of access to the rooms.

2. Entrance to the Collection shall be only by way of the main entrance to the Brotherton library building.

3. No attaché case may be brought into the Brotherton library building.

4. Exit from the Brotherton library building by the main entrance will be subject in every way to the regulations imposed by the University on all readers, the attendant being instructed to examine all books and parcels that are taken past the barrier.

5. Smoking is strictly forbidden.

6. The rooms are open to authorised readers from 9 a.m. to 1 p.m., and from 2.30 to 5 p.m. from Monday to Friday; on Saturday from 9 a.m. to 12 noon.

7. The rooms are closed for one week at Christmas, on the public holidays, and on all occasions when the Brotherton library is closed.

*Access to the Brotherton Collection*

8. Members of the Court, the Council and the Senate of the University, members of the academic staff of the University and such administrative officers as the Council of the University may decide, and, with special permission, graduates and undergraduates of the University shall be allowed to visit the rooms during any of the statutory hours when the rooms are open, always provided that such persons shall have no access to the shelves or cases unless accompanied by the Keeper. They shall sign the register upon entering.

9. Members of the Court, the Council, the Senate and the academic staff may have access to the Collection for purposes of research and reference subject to the permission of the Keeper, and upon signing the register.

10. Graduates and undergraduates of not less than 18 years of age may be admitted as readers (a) on the recommendation of a member of the professorial staff and/or the Vice-Chancellor, (b) on receiving the ticket issued for that purpose, defining the object of the research or the books of reference to be consulted, and (c) after signing the register. Each ticket shall be available for such period as may be decided in each case, but not longer than three months at a time.

11. Persons other than members of the University may be admitted as readers on the following conditions:

(a) Every application shall normally be made two days at least before admission is required.

(b) Applicants must apply to the Keeper and state in writing their place of residence, occupation, age and qualifications and the object for which they wish to use the Collection. The application must be accompanied by a written recommendation from a person of recognised position having personal knowledge of the applicant and certifying his fitness, reliability and competence to make proper use of the Collection.

(c) The application must receive the approval of the Keeper and the Librarian. All applications shall be reported to the Vice-Chancellor and to the Brotherton Collection committee.

(d) On permission being granted the applicant will receive a ticket, which must be presented to the attendant on entering the building and to the Keeper on entering the Brotherton Collection, and shall be available for such time as may be decided in each case. He shall sign the register each day. Such tickets shall not be transferable and shall be returned when expired.

12. Individual persons not being members of the University may be given special permission to visit the Collection accompanied by the Keeper.

13. Groups of persons not being members of the University may be admitted to visit the Collection at such times as may be prescribed.

14. In the absence of the Keeper, the Librarian or his accredited deputy shall act in his place.

*Rules applicable to all readers*

15. Readers admitted to use the Collection shall be subject to the general regulations of the University library so far as relevant.

16. No books, MSS. or other articles in the Collection may be removed from the Brotherton Collection rooms.

17. Books of exceptional value or rarity may be consulted only in the presence of the Keeper.

18. The use of fountain pens or ink while consulting the books or MSS. is forbidden, and no tracing, copying or reproduction shall be allowed without the express permission of the Keeper.

19. No mark of any kind may be made by a reader on any book or MS.

20. The Keeper, in consultation with the Librarian, may cancel or suspend the use of a reader's ticket at any time when deemed necessary. Such cancellation or suspension shall be reported to the committee.

FOR THE AGRICULTURAL LIBRARY

The library which is situated in the department of agriculture is open on Monday to Friday, from 9 a.m. to 5 p.m., and on Saturday, from 9 a.m. to 12 noon.

It is closed during one week at Christmas, on public holidays, and on all other days on which the University buildings are closed.

It is subject to the regulations of the Brotherton library, with the exception of regulations 3(c) and (d), 4(b) and (c), and 7, and with the following additions:

1. Reference books may not be removed from the library until 4.30 p.m. on Mondays to Fridays and after 11.30 a.m. on Saturdays, except by members of the staff. They must be returned by 10 a.m. on the next day on which the library is open. Members of the staff borrowing reference books before 4.30 p.m. must not take them out of the building until after that time.

2. Current numbers of periodicals may be borrowed under the same conditions as reference books.

3. All books must be returned to the library for the annual inspection ordinarily held in June. A fine of 2d. per book shall be imposed, up to the limit of the price of the book, for every day that it is retained beyond the time for its return for the inspection.

## FOR THE TEXTILE LIBRARY

The library which is situated in the department of textile industries is open on Monday to Friday, from 9 a.m. to 5 p.m., and on Saturday, from 9 a.m. to 12 noon.

It is closed for ten days at Christmas, on public holidays, and on all other days on which the University buildings are closed.

It is subject to the regulations of the Brotherton library, with the exception of regulations 3(b), (c) and (d), 4(c) and (d), 6(d), and 7, and with the following additions:

1. Current parts of periodicals and reference books may not be removed from the library until 4.30 p.m. on Mondays to Fridays, and after 11.30 a.m. on Saturdays, except by members of staff. They must be returned by 10 a.m. on the next day on which the library is open. Members of staff borrowing reference books before 4.30 p.m. must not take them out of the building until after that time. [This rule does not apply to two sets of periodicals which are available for use in the library only. These are the *Journal of the Society of Dyers and Colourists* and the *Journal of the Textile Institute*. Of the latter there is a duplicate set, which may be borrowed in the normal way.]
2. There are two copies of every textile thesis—a copy which may be borrowed and a reference copy. The latter is available only for consultation in the library.
3. A fine of 2d. per day is levied for each day during which a book is retained beyond the prescribed period, or beyond any date, of which a week's notice will be given, of recall for the annual inspection.
4. All books must be returned to the library for the annual inspection, ordinarily held in June.

## FOR THE MEDICAL LIBRARY

1. *Hours of opening*

The library is open on Monday to Friday, from 9 a.m. to 6 p.m., and on Saturday, from 9 a.m. to 1 p.m., except during the long vacation when it is open on Monday to Friday, from 9 a.m. to 5 p.m., and on Saturday, from 9 a.m. to 12.30 p.m.

It is closed from 24 to 30 December inclusive; from Good Friday to Easter Tuesday inclusive; on Whit Monday and Tuesday; and on August Bank Holiday Saturday, Monday and Tuesday.

2. *Admission*

(a) Members of the academic staff of the University, members of the medical and dental staff of the United Leeds Hospitals, members of the Leeds and West Riding Medico-Chirurgical Society and students of the School of Medicine and School of Dentistry are entitled to the use of the library subject to the following conditions:

(b) Full members of the Medico-Chirurgical Society are subject to the same regulations as members of the academic staff; temporary members are subject to the same regulations as students.

(c) Students other than those attending the School of Medicine or the School of Dentistry may be allowed to use the library only on production of a written recommendation from the head of the appropriate department and with the permission of the Librarian.

(d) Other persons may be allowed by the Librarian to consult books on stating the subject of their studies and on producing a satisfactory recommendation. In special cases and on payment of one guinea for twelve months they may also be allowed to borrow books at the discretion of the Librarian.

3. *Discipline*

(a) Silence shall be observed in the library.

(b) No smoking shall be permitted within the library.

(c) No bag, attaché case or parcel shall be brought into the library.

(d) No reader shall write in or otherwise mark books or periodicals belonging to the library. Any damage to or loss of books shall be made good to the satisfaction of the Librarian.

(e) The Librarian has the power to suspend the library privileges of any person who infringes the regulations, and shall report any such suspension to the library committee.

4. *Borrowing in general*

(a) No book shall be removed from the library unless the borrower shall have first filled in the form provided. The form will be returned to the borrower as a receipt for the book returned, and the borrower shall be responsible for the book so long as the form remains in the library uncancelled.

(b) All books may normally be borrowed with the exception of works of reference and books of special value and rarity; but the Librarian may withhold or restrict the circulation of any book in the library. He is further permitted to grant special facilities during a limited period to any person entitled to the use of the library.

(c) Reference books, volumes on the recent accessions shelves and the current numbers of periodicals may be borrowed only after 4 p.m. [12 noon on Saturday] and must be returned before 10 a.m. on the next day on which the library is open. Unbound numbers of periodicals, other than the current number, may be borrowed, after having been received by the library for not less than one calendar month, for a period of up to three days. Failure to comply with these conditions will incur a fine of 6d. for each day or portion of a day for which a book is retained.

The four most recent bound volumes of the *British Medical Journal* and the *Lancet* are treated as books of reference, and the current issues of these journals may not be borrowed.

(d) No person shall borrow a book from the library if he has in his possession any book which he has kept beyond the time allowed by the regulations, or if any fine or charge which he has incurred has not been paid.

(e) Theses of the University, with certain exceptions, may, with the consent of the Librarian, be consulted or borrowed.

(f) Books may not be taken abroad without the special permission of the Librarian.

5. *Borrowing by staff and research students*

(a) Members of the academic staff shall be entitled to have at one time not more than twenty-five books borrowed from the library, unless this number is increased by the special permission of the Librarian. Books may be retained until a notice is received from the Librarian that they are overdue, in which case they shall be returned to the library without delay. A book shall be regarded as overdue when it has been in the possession of the borrower for a fortnight and is required by another reader.

(b) Postgraduate research students and students in the final year of an Honours school shall have the same privileges and be subject to the same regulations as members of the academic staff except that they may not have at one time more than ten books in their possession.

(c) Professors, readers and heads of departments may obtain library keys for personal use only on application to the Librarian.

6. *Borrowing by students*

(a) Students shall have the right to have not more than three books borrowed from the library at one time except that this number may be increased by the Librarian on a recommendation from the head of a department.

(b) Every book shall be returned to the library on or before the fourteenth day following that on which it was taken out. If application is made personally or by post before the end of the period a book may be renewed for a further fortnight unless it is required by another reader.

(c) Failure to comply with the above condition shall entail a fine of 1d. in respect of each day or portion of a day for which the return of a book is overdue. A list of defaulters will be exhibited in the library.

7. *Annual inspection*

All books must be returned for the annual inspection ordinarily held in June. The issue of books will be suspended during the inspection. Failure to return books under this rule shall involve a fine of 2d. in respect of each day or portion of a day for which the return of a book is overdue.

8. *Inter-library loans*

Books borrowed from other libraries are subject in each case to the conditions imposed by the lending library. If books are required for home reading this fact must be stated in the application.

## FOR THE DENTAL LIBRARY

The dental library which is situated in the School of Dentistry is subject to the regulations for the medical library, with the following modifications:

1. *Hours of opening*

The library is open on Monday to Friday, from 9 a.m. to 5 p.m., and on Saturday, from 9 a.m. to 12.30 p.m.

It is closed from 24 to 30 December inclusive; from Good Friday to Easter Tuesday inclusive; on Whit Monday and Tuesday; and on August Bank Holiday Saturday, Monday and Tuesday.

2. *Admission*

(d) The borrowing fee for external users of the library is 10s. 6d. for twelve months.

4. *Borrowing in general*

(c) The proviso concerning the *British Medical Journal* and the *Lancet* does not apply.

5. *Borrowing by staff and research students*

(a) Members of the academic staff shall be entitled to have at one time not more than twenty books borrowed from the library, unless this number is increased by the special permission of the Librarian.

(b) For 'postgraduate research students' read 'postgraduate students'.

(c) Does not apply to the Dental School library.

## FOR THE LAW LIBRARY

The library which is situated in the department of law is open on Monday to Friday from 9 a.m. to 5 p.m., and on Saturday from 9 a.m. to 1 p.m. (9 a.m. to 12.30 p.m. during the long vacation).

It is closed during one week at Christmas, on public holidays, and on all other days on which the University buildings are closed.

It is subject to the regulations of the Brotherton library, with the exception of regulations 3(d), 4(c), and 7, and with the following additions:

1. Current parts of periodicals and certain copies [marked with a blue label] of books in exceptional demand may only be borrowed overnight or for the week-end or for any other period during which the library is closed. They will not be issued before 4.30 p.m. on Monday to Friday and before 12 noon on Saturday, and must be returned by 10 a.m. on the next day on which the library is open. Other books in much demand may be borrowed subject to return on the following day, or may be issued for such other limited periods as the Librarian may deem advisable. Failure to comply with the provisions of this rule will incur a fine of 6d. in respect of each day or portion of a day by which the return of the book is overdue.

2. All books must be returned to the library for the annual inspection ordinarily held in June. Failure to return books under this rule shall involve a fine of 2d. in respect of each day or portion of a day by which the return of a book is overdue.

## THE INSTITUTE OF EDUCATION LIBRARY AND DEPARTMENTAL LIBRARIES

The regulations governing the use of the Institute of Education library will be found in the handbook of the Institute; and those relating to the departmental libraries are severally posted in the departments concerned. Information about these libraries can also be obtained in the Brotherton library.

## THE HOLDEN LIBRARY

The Holden library is the property of the diocese of Ripon. It has been deposited in the Brotherton library and is available to the clergy of the dioceses of Ripon, Wakefield and Bradford and to members of the University. It is kept up to date by regular additions. Regulations governing its use may be obtained on application to the Librarian.

## THE UNIVERSITY COIN COLLECTION

The University Coin Collection is kept for the time being in the Brotherton Library. It consists of a large 18th-century collection of Greek, Roman and English coins, with some medals, and a series of special cabinets. The latter include Iron Age British coins, Saxon and Medieval coins from northern mints, English milled gold, and a fine series of 17th-century tradesmen's tokens from Yorkshire and Derbyshire.

The regulations for use of the Collection are:

1. *General*

In the absence of the Curator, the Librarian may act in his place.

2. *Visiting numismatists*

Visiting numismatists may have access to the Collection each Monday to Friday from 10 a.m. to 12 noon and from 2 p.m. to 5 p.m. on the following conditions:

(a) Notice should be given to the Curator in writing, preferably at least a week before the proposed visit, stating the class of coins that the visitor wishes to see.

(b) The Curator, or in his absence a member of the library staff, will be present whenever coins are being studied.

(c) No coins may be moved from the Coin Room.

3. *Members of University staff*

Members of staff may have access to the Collection provided that they notify the Curator in advance. At the discretion of the Curator, certain classes

of coins may be borrowed during term for teaching purposes on the following conditions:

(a) The Curator should be notified at least a day in advance.

(b) The borrower must sign for any coins removed from the Collection in the register provided, and will be held responsible for their safety. A voucher must also be signed at the reading room counter, and should be claimed as a receipt when coins are returned.

(c) Borrowed coins must be returned on the same day.

(d) Coins must be carried in the containers provided and must not be removed from University premises.

4. *Students of the University*

At the discretion of the Curator, students of the University may have access to the Collection on the same conditions as visiting numismatists.

5. *Display*

From time to time coins may be withdrawn from the Collection by the Curator for exhibition in the University.

## UNIVERSITY MUSEUM OF THE HISTORY OF EDUCATION

23 Cavendish Road, Leeds 2

Reader in the Sources of English Educational History and Curator:
W. E. Tate, B.Litt., F.S.A., F.R.Hist.S. Telephone: Leeds 31751, exts. 190 (29, 353)

Home address: 23 Cliff Road Gardens, Leeds 6. Telephone: Leeds 53349.

The Museum was established in 1950 and formally recognised by the University in 1958. It contains the only collection quite of its kind in the country. The Museum's first aim is to document and illustrate the history of education in England generally (but especially in Yorkshire and the North) from the earliest times to the present day. It tries also to act as a centre of research and publication on its subject, and to help and advise persons interested in it, and working on it, whether or not they are members of this or any other University. It is a member of the Museums Association and it is recognised by the British Records Association for the deposit of original quasi-archival material bearing upon its special interests. It is open to junior and senior members of the University and its associated colleges, to serving teachers in the area, to members and officers of local education authorities and to members of the general public who are seriously interested in educational matters. The Curator is generally on the premises each morning in term and he can usually arrange to be there at other times, in or out of term, by appointment.

Most of the Museum's contents (except original archives) are available for loan to responsible persons concerned with the organization of local 'Education

Weeks', school 'Open Days', etc. There is no charge for admission to the Museum or in connexion with any services it may render. Persons borrowing any of its contents are expected however to make their own arrangements for transport and the safe return of any loans, and to ensure their safety while they are off the Museum premises.

The Museum owes many of the most interesting items in the collections to the goodwill and generosity of friends in and outside the University, who have deposited them as long-term loans or as outright gifts. The Curator will be most happy to accept further gifts and loans of pictorial, printed and written material suitable for inclusion in the collections. He seeks such objects as needlework samplers (especially of course any noted as worked in Yorkshire schools), old completed school exercise books, whether or not of local provenance, ancient school textbooks on any of the curricular subjects, obsolete teaching aids and school apparatus. He welcomes particularly engravings, photographs and other illustrations of school buildings of historical interest, and portraits of school benefactors, of distinguished local schoolmasters, or of persons of eminence, who have as children been pupils in Yorkshire schools.

The Museum is not a local record office, recognized as such by the Master of the Rolls, so it does not normally seek to gather archival material. (The Curator will be very happy to advise on the deposit of any of this in one of the local record offices.) It is very glad however, to learn of the existence of such matter bearing on its subject, and, given the necessary permission, to have photostatic or microfilm copies made of it. The lender is, of course, always asked to accept with the University's compliments copies of any prints taken. By courtesy of the University Photographer, special arrangements have been made so that such material shall not lose its 'record' value by being taken temporarily out of the hands of its owner or custodian. It is possible for him by appointment to bring it to the University, to remain while the photographs are being taken and to have it returned to him immediately, the prints being made later at the Photographer's convenience.

The Curator will be very glad to answer inquiries, to welcome visitors, to accept gifts or loans, and to give or to receive information bearing on his special field of interest.

# FEES

## INTRODUCTORY

Fees must be paid to the Bursar promptly upon demand. Cheques should be crossed and made payable to 'The University of Leeds'.

On presentation of a form signed by the Dean of the Faculty authorising attendance upon courses of study, and upon payment of the requisite fees, the Bursar will issue a registration certificate entitling the student to attend such courses. This certificate must be presented by the student on request, to the professors or lecturers whose classes or lectures he is authorised to attend.

Students who, for any reason, cease to attend the University during a session have no claim to a refund of fees. Where fees are being paid in instalments (Table 2, page 281) the whole of the remaining instalments must be paid.

The University reserves the right to revise fees at any time without notice.

## INCLUSIVE ANNUAL ACADEMIC FEE

On payment of the fee a student is entitled to attend the prescribed course of lectures, to take the appropriate examinations and, if successful, to be awarded the appropriate degree or diploma. Details of the inclusive academic fees are shown in table 1 on pages 273-80.

Unless otherwise stated, payment of the inclusive academic fee entitles a student to membership of the University Union.

Students paying a fee of £67 or more will be admitted without further charge to any additional classes at which their attendance has been sanctioned by the Vice-Chancellor and the head of the department concerned.

The fee may be paid either sessionally in advance or (with certain exceptions) by terminal instalments. Details of the procedure to be followed for payment by terminal instalments are given in table 2 on page 281.

Charges additional to the fee will be made in respect of late entries for examinations, re-examinations and (for certain courses) use of equipment. Details of these additional charges are given overleaf and in the appropriate tables.

## OTHER FEES AND CHARGES

*Examination late entry fee*

Examination entries will be accepted after the last dates for receipt shown in the University *Calendar* only on payment of an additional fee of 10s. Entries submitted more than six weeks after the closing dates will be accepted only in special circumstances and on payment of a special late entry fee of £1.

*Re-examination fee*

Details of re-examination fees are shown in table 3 on page 282.

*Fees for separate lectures and laboratory work*

Under certain circumstances fees will be calculated according to the scale for separate lectures and laboratory work set out in table 4 on page 283.

*Fees for research*

Persons admitted to carry out research in the University, other than as part of a course leading to a higher degree will be required to register as research students and to pay the fees set out in table 5 on page 284.

*Library*

All registered students of the University are entitled to use the libraries without payment.

*Recapitulatory and other courses in medical, surgical and dental subjects*

Details of the fees for these courses are shown in table 6 on page 285.

*Deposits*

Students in the Faculties of Science, Technology and Medicine may be required to make certain deposits for use of expendable equipment or against possible damage to apparatus or equipment. Deposits are returnable after deduction of costs of damage or losses or use of expendable equipment. Details of the deposits charged are shown in table 7 on page 286.

*Miscellaneous charges*

Miscellaneous charges may be incurred in respect of use of equipment, work in the laboratories during vacation, field work and parts of courses spent abroad. Details of these additional charges are given in table 8 on page 287.

## FEES FOR RESIDENCE

Students who do not live at home or with relatives are required to live in halls of residence or in approved lodgings. Fees for residence are set out in table 9 on page 288.

# TABLE 1

## INCLUSIVE ANNUAL ACADEMIC FEES

### THE FACULTY OF ARTS

| | £ |
|---|---|
| *Bachelor of Arts in general, combined and special studies* | 67 |
| *Bachelor of Arts in special studies in textile design or in textile management* | 82 |
| *Bachelor of Divinity* | |
| Graduates of the University | |
| One-year course | 45 |
| Two-year course | |
| First year | 38 |
| Second year | 26 |
| Others | 38 |
| *Bachelor of Music* | 45 |
| *Master of Arts* | |
| Graduates of the University | |
| With supervision: full time | |
| First year | 57 |
| Second and subsequent years | 17 |
| With supervision: part-time | |
| First year | 27 |
| Second and subsequent years | 17 |
| Without supervision (single payment) | 20* |
| Others: full-time | 67 |
| part-time | 27 |
| *Master of Education* | |
| Two-year course (full time) | |
| Graduates of the University | 57 |
| Others | 67 |
| Three-year course (part-time) | |
| Graduates of the University | 35 |
| Others | 40 |
| *Doctor of Philosophy* | |
| Full-time | 67 |
| Part-time | |
| Leeds graduates | |
| First year | 27 |
| Second and subsequent years | 17 |
| Others | 27 |
| Candidates studying at other institutions (single payment) | 40* |

*This fee does not entitle the student to membership of the University Union.

| | £ |
|---|---|
| *Doctor of Letters* | 50* |
| *Doctor of Divinity* | 50* |
| *Doctor of Music* | 50* |
| *Diploma in Hebrew* | |
| One-year course | 45 |
| Two-year course | |
| First year | 20* |
| Second year | 20* |
| *Diploma in Spanish* | 12* |
| *Diploma in theology* | 50 |
| *Postgraduate diploma in Semitic studies* | 67 |
| *Postgraduate diploma in English studies* | 100 |
| *Postgraduate diploma in English as a second language* | 100 |
| *Postgraduate diploma in folk life studies* | 100 |
| *Graduate certificate in education* | 67 |
| *Graduate certificate in educational studies* | 67 |
| *Diploma in primary education* | 82 |
| *Diploma in secondary education* | 82 |
| *Diploma in the education of backward children* | 82 |
| *Diploma in religious education* | 82 |
| *Diploma in curricular studies* | 82 |
| *Diploma in physical education* | 107 |
| *Certificate in the teaching of Hebrew* | Fees at scale in table 4 |
| *Certificate in Russian* | Fees at scale in table 4 |
| *Certificate in Arabic* | Fees at scale in table 4 |

*This fee does not entitle the student to membership of the University Union.

## THE FACULTY OF ECONOMIC AND SOCIAL STUDIES

| | £ |
|---|---|
| *Bachelor of Arts in general, combined and special studies* | 67 |
| *Bachelor of Commerce* | |
| With accountancy or law | 67 |
| With agricultural economics or a technological subject | 82 |
| *Master of Commerce* | |
| Graduates of the University | |
| With supervision: full-time | |
| First year | 57 |
| Second and subsequent years | 17 |
| With supervision: part time | |
| First year | 27 |
| Second and subsequent years | 17 |
| Without supervision (single payment) | 20* |
| Others: full-time | 67 |
| part-time | 27 |
| *Doctor of Philosophy* | |
| Full-time | 67 |
| Part-time | |
| Leeds graduates | |
| First year | 27 |
| Second and subsequent years | 17 |
| Others | 27 |
| Candidates studying at other institutions (single payment) | 40* |
| *Postgraduate diploma in industrial management* | 82 |
| *Diploma in development administration* | 150 |

*This fee does not entitle the student to membership of the University Union.

## THE FACULTY OF LAW

| | £ |
|---|---|
| *Bachelor of Laws* | 67 |
| *Master of Laws* | |
| Graduates of the University | |
| With supervision: full-time | |
| First year | 57 |
| Second and subsequent years | 17 |
| With supervision: part-time | |
| First year | 45 |
| Second and subsequent years | 17 |
| Without supervision (single payment) | 20* |
| Others: full-time | |
| First year | 57 |
| Second and subsequent years: part-time | 27 |
| First year | 45 |
| Second and subsequent years | 22 |
| *Doctor of Philosophy* | |
| Full-time | 67 |
| Part-time | |
| Leeds graduates | |
| First year | 27 |
| Second and subsequent years | 17 |
| Others | 27 |
| Candidates studying at other institutions (single payment) | 40* |
| *Doctor of Laws* | 50* |

*This fee does not entitle the student to membership of the University Union.

## THE FACULTY OF SCIENCE

| | £ |
|---|---|
| *Bachelor of Science in general or special studies* | 82 |
| *Bachelor of Science in special studies in mathematics or geography* | 67 |
| *Bachelor of Science in combined studies in mathematics and statistics, in geography and mathematics or in mathematics and history of science and/or philosophy* | 67 |
| *Bachelor of Science in other combined schemes of study* | 82 |
| *Master of Science* | |
| Full-time | |
| With laboratory facilities | 82 |
| With supervision but without laboratory facilities: | |
| Leeds graduates | |
| First year | 57 |
| Second and subsequent years | 17 |
| Others | 67 |
| Part-time | |
| With laboratory facilities | |
| Leeds graduates | |
| First year | 35 |
| Second and subsequent years | 17 |
| Others | 35 |
| With supervision but without laboratory facilities: | |
| Leeds graduates | |
| First year | 27 |
| Second and subsequent years | 17 |
| Others | 27 |
| Without supervision (single payment) | 20* |
| *Doctor of Philosophy* | |
| Full-time | |
| Mathematics or geography | 67 |
| Other subjects | 82 |
| Part-time | |
| Mathematics or geography | |
| Leeds graduates | |
| First year | 27 |
| Second and subsequent years | 17 |
| Others | 27 |
| Other subjects | |
| Leeds graduates | |
| First year | 35 |
| Second and subsequent years | 17 |

*This fee does not entitle the student to membership of the University Union.

| | |
|---|---|
| Others | 35 |
| Candidates studying at other approved institutions (single payment) | 40* |
| *Doctor of Science* | 50* |
| *Postgraduate diploma in the history and philosophy of science* | |
| Full-time course | 67 |
| Part-time course | 40 |

*This fee does not entitle the student to membership of the University Union.

## THE FACULTY OF TECHNOLOGY

| | £ |
|---|---|
| *Bachelor of Science* | 82 |
| *Master of Science* | |
| Full-time | |
| With laboratory facilities | 82 |
| With supervision but without laboratory facilities: | |
| Leeds graduates | |
| First year | 57 |
| Second and subsequent years | 17 |
| Others | 67 |
| Part-time | |
| With laboratory facilities | |
| Leeds graduates | |
| First year | 35 |
| Second and subsequent years | 17 |
| Others | 35 |
| With supervision but without laboratory facilities: | |
| Leeds graduates | |
| First year | 27 |
| Second and subsequent years | 17 |
| Others | 27 |
| Without supervision (single payment) | 20* |
| *Doctor of Philosophy* | |
| Full-time | 82 |
| Part-time | |
| Leeds graduates | |
| First year | 35 |
| Second and subsequent years | 17 |
| Others | 35 |
| Candidates studying at other approved institutions (single payment) | 40* |
| *Doctor of Science* | 50* |
| *Postgraduate diplomas* | 82 |
| *Non-graduate diplomas* | 82 |

*This fee does not entitle the student to membership of the University Union.

## THE FACULTY OF MEDICINE

| | £ |
|---|---|
| *Bachelor of Medicine and Bachelor of Surgery** | 82† |
| Three-year clinical course | 82 |
| *Bachelor of Dental Surgery* | 82†‡ |
| *Master of Surgery* | 50§ |
| *Master of Dental Surgery* | 50§ |
| *Doctor of Medicine* | 50§ |
| *Diploma in public health* | |
| First year | 50§ |
| Second year | 30§ |
| *Diploma in psychological medicine* | |
| Part 1 (two terms) | 30§ |
| Part 2 (four terms) | 50§ |
| Part 2 (candidates proceeding to external examinations) | 40§ |
| *Certificate in psychiatric social work* | 75 |
| *Diploma in dental surgery* | 82 |
| *Diploma in nursing* | 35§ |
| *Nurse teacher's certificate* | 65§ |
| *Health visitor's training course* | 65 |

*RESIDENCE. For a part of the medical course, students must be in residence in Croft Hall for which a fee of £50 for a single room or £46 for a shared room is charged. £12 per year for the first four years of a full course or £16 per year for the three-year course may be paid in respect of this fee in addition to the annual inclusive academic fee. On coming into residence in Croft Hall the amount thus paid on account will be adjusted to the amount due either by a further payment by the student (which shall be immediately due and payable) or by a refund of the excess paid by the student.

†When the sixth session of the medical or dental degree course is shorter than three terms the fee payable will be £27 10s. a term.

‡A conferment fee of £10 is payable by students registered for the degree of Bachelor of Dental Surgery, who are permitted to sit, and are successful in the examinations for the diploma in Dental Surgery, or are awarded the diploma on the results of the degree examinations.

§This fee does not entitle the student to membership of the University Union.

## TABLE 2
## TERMINAL INSTALMENTS

Applicable only to students reading for a first degree or diploma

Inclusive academic fees paid by terminal instalments are calculated and are payable in accordance with the following:

| | |
|---|---|
| First instalment (payable on registration) | 50 per cent of the inclusive academic fee. |
| Second instalment (payable not later than the end of the first week of the second term) | 30 per cent of the inclusive academic fee, plus £1. |
| Third instalment (payable not later than the end of the first week of the third term) | 20 per cent of the inclusive academic fee, plus £1. |

A student who elects to pay inclusive academic fees by instalments and who withdraws from the University before the end of a session, must pay the whole of the remaining instalments of the session's fees.

## TABLE 3

# RE-EXAMINATION FEES

The maximum re-examination fee payable on any one occasion is £8 except in the case of the fees marked with an asterisk.

| | £ | s. | d. | |
|---|---|---|---|---|
| *Bachelor of Arts, Commerce or Laws* | | | | |
| First- and second-year courses | 2 | 0 | 0 | per subject |
| Final—whole examination or part thereof | 4 | 0 | 0 | „ „ |
| *Bachelor of Science* | | | | |
| First- and second-year courses | 2 | 0 | 0 | per subject |
| Final or principal courses | 4 | 0 | 0 | „ „ |
| *Bachelor of Science in special studies in mathematics or geography* | | | | |
| First- and second-year courses | 2 | 0 | 0 | per subject |
| Final—whole examination or part thereof | 4 | 0 | 0 | „ „ |
| *Bachelor of Medicine and Bachelor of Surgery* | | | | |
| First examination | 2 | 0 | 0 | per subject |
| Second, third and fourth examination | 3 | 0 | 0 | „ „ |
| Final examination | 4 | 0 | 0 | „ „ |
| *Bachelor of Dental Surgery and the diploma in dental surgery* | | | | |
| First examination | 2 | 0 | 0 | per subject |
| Second and third examination | 3 | 0 | 0 | „ „ |
| Final examination | 4 | 0 | 0 | „ „ |
| *Diplomas in subjects within the Faculty of Arts* | 1 | 0 | 0 | per subject |
| *Postgraduate diplomas in subjects within the Faculty of Technology* | 4 | 0 | 0 | |
| *Non-graduate diplomas in subjects within the Faculty of Technology (except textile industries)* | 1 | 0 | 0 | „ subject |
| *Diploma in textile industries* | | 10 | 0 | „ textile paper |
| | 2 | 0 | 0 | „ ancillary subject |
| *Diploma in psychological medicine* | 6 | 6 | 0 | (first part) |
| | 12 | 12 | 0* | (second part) |
| *Certificate in psychiatric social work* | 5 | 0 | 0 | |
| *Diploma in public health* | 12 | 0 | 0* | |
| *Diploma in nursing and nurse teacher's certificate* | 3 | 0 | 0 | per part |
| *Graduate certificate in education* | 2 | 0 | 0 | „ „ |
| *Certificates in subjects within the Faculty of Arts* | 1 | 0 | 0 | „ subject |

## TABLE 4

# FEES FOR SEPARATE LECTURES, LABORATORY OR PRACTICAL WORK

Fees for separate lectures, laboratory or practical work are calculated and payable according to the following:

| | £ s. d. |
|---|---|
| The first lecture hour per week per subject: | |
| One term | 4 0 0 |
| Two terms | 6 0 0 |
| Three terms | 8 0 0 |
| Each subsequent lecture hour per week | |
| One term | 2 0 0 |
| Two terms | 3 0 0 |
| Three terms | 4 0 0 |
| Each laboratory hour per week | |
| One term | 2 0 0 |
| Two terms | 3 0 0 |
| Three terms | 4 0 0 |

Students reading for the degree of Doctor of Philosophy who wish to attend lectures or carry out laboratory work not expressly recommended by the heads of their departments will be required to pay fees calculated at the rate of two-thirds of the above scale.

| | |
|---|---|
| Approved laboratory work in vacations, per month: | |
| 1 day per week | 2 10 0 |
| 2 days per week | 5 0 0 |
| 3 days per week | 7 10 0 |
| 4 or more days per week | 10 0 0 |

## TABLE 5

# FEES FOR RESEARCH
(not leading to a higher degree)

| | £ |
|---|---|
| One month | 10 |
| One term | 30 |
| Three terms | 72 |
| Persons engaged on private industrial research per month | 12* |

Fees for research include University lectures or laboratory work recommended by the head of the student's department. For other lectures or laboratory work, fees calculated at the rate of two-thirds of the scale in table 4 will be charged.

*Plus additional charge for any special expenditure by the University.

## TABLE 6

# FEES FOR RECAPITULATORY AND OTHER COURSES IN MEDICAL, SURGICAL AND DENTAL SUBJECTS

### RECAPITULATORY COURSES

| *For the degrees of Bachelor of Medicine and Bachelor of Surgery* | £ | s. | d. |
|---|---|---|---|
| Anatomy and physiology | | | |
| Three months | 10 | 0 | 0 |
| Six months | 20 | 0 | 0 |
| Anatomy, three months | 6 | 0 | 0 |
| Physiology, three months | 6 | 0 | 0 |
| Pharmacology, three months | 4 | 0 | 0 |
| Pathology and bacteriology, three months | 4 | 0 | 0 |
| Other subjects, three months | 4 | 0 | 0 |
| Clinical fee per six months' extension period (or less) | 25 | 0 | 0 |

### OTHER COURSES

| | | | |
|---|---|---|---|
| Lectures in dietetics for the School of Dietetics | 5 | 0 | 0 |
| Temporary hospital practice at the General Infirmary at Leeds | | | |
| Two months | 6 | 0 | 0 |
| Three months | 9 | 0 | 0 |
| Four months | 12 | 0 | 0 |
| Six months | 18 | 0 | 0 |
| Use of dissecting room (external students) | | | |
| One month | 4 | 0 | 0 |
| Three months | 10 | 0 | 0 |
| 'Perpetual studentship' of the General Infirmary at Leeds entitling to admission to ordinary clinical instruction. (For registered practitioners who are not graduates in medicine and surgery of the University.) | 25 | 0 | 0 |
| Dentistry | | | |
| Additional dental hospital practice | | | |
| Three months | 18 | 0 | 0 |
| Six months | 32 | 0 | 0 |
| Postgraduate work, per half day | 2 | 0 | 0 |
| Additional pupilage in dental mechanics | | | |
| Two months | 10 | 0 | 0 |
| Three months | 17 | 0 | 0 |
| Nine months | 45 | 0 | 0 |

## TABLE 7
## DEPOSITS

| The following deposits are payable: | £ | s. | d. |
|---|---|---|---|
| 1. By students in the Faculty of Science | | | |
| (*a*) Reading for the degree of Bachelor of Science in special studies in pharmacy or pharmacology, per session | 2 | 10 | 0 |
| (*b*) Reading for the degree of Bachelor of Science in special studies in biochemistry | 4 | 0 | 0 |
| 2. By students in the Faculties of Science, Technology and Medicine | | | |
| (*a*) Working in the laboratories of the school of chemistry, for apparatus, per session | 6 | 0 | 0 |
| (*b*) Working in the laboratories of the department of agriculture, for apparatus, per session | 2 | 10 | 0 |
| (*c*) Working in the laboratories of the department of applied mineral sciences, for instruments and equipment, per session | 3 | 10 | 0 |
| (*d*) Working in the laboratories of the Procter department of food and leather science, for apparatus | 2 | 0 | 0 |
| 3. By students in the Faculty of Medicine | | | |
| (*a*) Reading for an initial medical qualification, for materials and apparatus in the department of physiology | | 10 | 0 |
| (*b*) Reading for an initial medical qualification in the department of pathology, for slides | 1 | 10 | 0 |
| (*c*) Reading for an initial medical qualification in the department of biochemistry | 6 | 10 | 0 |
| 4. By postgraduate and research students in the Faculties of Science and Technology | | | |
| (*a*) Working in the departments of the school of chemistry, for apparatus | 10 | 0 | 0 |
| (*b*) Working in the departments of botany, zoology, textile industries, colour chemistry and dyeing and agriculture, for apparatus | 5 | 0 | 0 |

Deposits under paragraph 1 above are payable at the beginning of each session of the course; those under paragraph 2 at the beginning of the session(s) during which laboratory work will be carried out; those under paragraph 3 at the beginning of the session during which work in the departments specified will be carried out; those under paragraph 4 at the beginning of the candidate's *course*.

The deposits are payable with the inclusive academic fee at the beginning of the appropriate session(s).

Except where stated the deposits are repaid at the end of the session (those under paragraph 4 at the end of the *course*) after deduction of an appropriate charge for damage to apparatus or equipment or use of expendable equipment. If breakages exceed the amount initially deposited a further deposit will be required.

## TABLE 8

# MISCELLANEOUS CHARGES

The following miscellaneous charges are payable:

| | |
|---|---|
| 1. By overseas students working in the department of textile industries, for equipment and apparatus, per session | 20 0 0 |
| 2. By students reading for the degree of Bachelor of Laws, for hire of books, per session | 2 0 0 |
| 3. For locker rent, per session | 5 0 |

(*a*) In the Faculty of Medicine a charge of £2 is payable at the beginning of the first or second year of the course. The balance after deducting the rent of 5s. per session is refunded at the end of the course, subject to the key being returned within one week and the locker being left in good condition.

(*b*) In faculties other than the Faculty of Medicine, no locker deposit is required but students must provide their own padlock and key for their locker.

(*c*) On the lower ground floor of University House, a deposit of 10s., in addition to the rent of 5s., is required at the beginning of each session. The deposit is refunded at the end of the session subject to the key being returned within one week and the locker being left in good condition.

| | |
|---|---|
| 4. By students in certain departments in the Faculties of Science and Technology in respect of travelling and residential expenses in connection with field work and by students in certain departments of modern languages for parts of courses spent abroad. | Details from appropriate departments. |

TABLE 9

# FEES FOR RESIDENCE

## HALLS FOR MEN

| | *Terminal instalments* | | | |
|---|---|---|---|---|
| | *1st term* | *2nd term* | *3rd term* | *Total* |
| | £ | £ | £ | £ |
| Devonshire and Lyddon Halls, inclusive of lunches | 64 | 64 | 63 | 191 |
| Sadler and Bodington Halls, exclusive of lunches Monday to Friday | 57 | 57 | 57 | 171 |

Where the total fee, as stated above, is paid in one sum at the beginning of the first term and not in terminal instalments the total fee will be reduced by £1.

Where permission is granted to a student who has already paid a full session's fee to be in residence for a further period different from, or additional to the normal terms, the charge will be at the rate of £5 a week.

For residence in *Croft Hall*, see p. 280.

## HALLS FOR WOMEN

| | *Terminal instalments* | | | |
|---|---|---|---|---|
| | *1st term* | *2nd term* | *3rd term* | *Total* |
| | £ | £ | £ | £ |
| Ellerslie Hall | | | | |
| Single study-bedroom | 60 | 60 | 60 | 180 |
| Shared study-bedroom (inclusive of lunches) | 58 | 58 | 58 | 174 |
| Oxley, Weetwood, Tetley and Lupton Halls | | | | |
| Single study-bedroom | 54 | 53 | 53 | 160 |
| Shared study-bedroom (exclusive of lunches Monday to Friday) | 52 | 51 | 51 | 154 |

Where the total fee, as stated above, is paid in one sum at the beginning of the first term—and not in terminal instalments—the total fee will be reduced by £1.

Where permission is granted to a student who has already paid a full session's fee to be in residence for a further period additional to the normal terms, the charge will be at the rate of £5 a week.

A deposit of £1 (£2 10s. for Ellerslie and Tetley Halls) will be payable at the beginning of each session by students in women's halls to cover cost of possible breakages, etc., the balance not called upon being refunded at the end of the session. This deposit will be payable with the hall of residence fee.

HENRY PRICE BUILDING

| | |
|---|---|
| Large single room | £91 per session |
| Single room | £88 per session |
| Double or duplex room | £73 per session |
| Married quarters | £176 per session |

The fees are payable in three equal instalments

APPROVED LODGINGS FOR MEN

| | *1st term* £ | *2nd term* £ | *3rd term* £ | *Total* £ |
|---|---|---|---|---|
| Amount payable by termly instalments only, exclusive of lunches Monday to Friday during the session | 36 to 46 | 33 to 42 | 36 to 46 | 105 to 134 |

APPROVED LODGINGS FOR WOMEN

| | *1st term* £ | *2nd term* £ | *3rd term* £ | *Total* £ |
|---|---|---|---|---|
| Amount payable by termly instalments only, exclusive of lunches Monday to Friday during the session | 47.11.6 | 45.0.0 | 45.0.0 | 137.11.6 |

For residence in *Croft Hall*, see p. 280.

# THE FACULTY OF ARTS

## ORDINANCE II

### DEGREES IN ARTS

1. The degrees in Arts shall be:

Bachelor of Arts (B.A.)
Bachelor of Divinity (B.D.)
Bachelor of Music (B.Mus.)
Master of Arts (M.A.)
Master of Education (M.Ed.)
Doctor of Philosophy (Ph.D.)
Doctor of Letters (Litt. D.)
Doctor of Divinity (D.D.)
Doctor of Music (D.Mus.)

### THE DEGREE OF BACHELOR OF ARTS

2. The degree of Bachelor of Arts shall be conferred upon candidates who have fulfilled the requirements as to study and examinations; the degree shall be awarded with Honours to those candidates who attain a sufficiently high standard in the examinations.

3. Candidates may proceed to the degree of Bachelor of Arts by means of courses in general studies or in combined studies or in special studies.

4. All candidates for the degree of Bachelor of Arts shall be required to have passed the examination for matriculation or to have obtained a certificate of exemption therefrom, and thereafter to have pursued approved courses of study for not less than three academic years.

5. With the permission of the Board of the Faculties of Arts, Economic and Social Studies and Law, a candidate may transfer between courses leading to the degree of Bachelor of Arts in general studies, combined studies and special studies.*

6. Except with the special permission of the Senate:

(a) Every candidate for the degree of Bachelor of Arts shall be required to present himself for the final examination at the end of the third or fourth academic year from the time when he has entered upon one of the courses of study approved by the University for the degree.

(b) A candidate failing in the final examination for the degree of Bachelor of Arts will not be allowed to present himself for re-examination on more than one occasion.

(c) A candidate who does not pass the final examination at his first attempt will not be eligible for the award of the degree with Honours.

(d) No candidate will be allowed to present himself for re-examination for the degree of Bachelor of Arts later than the end of the fifth academic year after his entry upon the approved course of study.

*Such a transference may necessitate the extension of the candidate's scheme of study by one year.

7. (a) Candidates who have passed the final examination for the degree of Bachelor of Arts may be awarded:
(i) the degree of Bachelor of Arts with first class Honours,
or (ii) the degree of Bachelor of Arts with second class Honours, first division,
(iii) the degree of Bachelor of Arts with second class Honours, second division,
or(iv) the degree of Bachelor of Arts with third class Honours,
or (v) the degree of Bachelor of Arts.

(b) The names of successful candidates in each group shall be arranged in alphabetical order.

(c) The names of candidates who have passed the examination for the degree of Bachelor of Arts in combined or in special studies shall be published in such form as to distinguish the school of combined or special studies in which each has passed.

8. A candidate who has been awarded the degree of Bachelor of Arts in general, combined or special studies may not present himself a second time for the same examination.

9. A candidate who has completed the courses and passed the final examination prescribed for the degree of Bachelor of Arts in general studies may, with the permission of the Senate given on the recommendation of the Board of the Faculties of Arts, Economic and Social Studies and Law, present himself for the examination for the degree of Bachelor of Arts in any school of combined or special studies after the expiration of one year or not more than two years, if during this period he has attended approved courses of study.

10. A candidate who has passed the final examination for the degree of Bachelor of Arts in any of the schools of combined or special studies may, with the permission of the Senate given on the recommendation of the Board of the Faculties of Arts, Economic and Social Studies and Law, present himself for the examination for the degree of Bachelor of Arts in any other school of combined or special studies or for the final examination for the degree in general studies, after the expiration of one year or not more than two years, if during this period he has attended approved courses of study.

[See also the regulations on page 302.]

## THE DEGREE OF BACHELOR OF ARTS IN GENERAL STUDIES

11. Candidates for the degree of Bachelor of Arts in general studies shall in the first year of the scheme of study be required

(a) to attend an approved one-year course of study in each of *four* subjects, and

(b) to pass the prescribed examinations.

(These requirements are identical with those laid down in article 14 overleaf.)

12. Candidates for the degree of Bachelor of Arts in general studies shall in the second and third years of the scheme of study be required

(a) to attend an approved two-year course in each of *three* subjects chosen from among those taken in the first year, and

(b) to pass the prescribed examinations.

13. Candidates shall select their subjects in accordance with the regulations for the degree of Bachelor of Arts in general studies (see pages 302-4).

## THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES

14. Candidates for the degree of Bachelor of Arts in combined studies shall in the first year of the scheme of study be required

(a) to attend an approved one-year course in each of *four* subjects, and

(b) to pass the prescribed examinations.

(These requirements are identical with those laid down in article 11 above.)

15. Candidates shall select their subjects in the first year of the scheme of study in accordance with the regulations for the degree of Bachelor of Arts in combined studies (see pages 302-4).

16. Candidates for the degree of Bachelor of Arts in combined studies will be admitted to a school of combined studies only if both subjects of the school have been included among the four subjects taken in the first year and only with the consent of the heads of both departments concerned; thereafter candidates shall be required to attend, in the second and third years of the scheme of study for the school, an approved two-year course in each of *two* subjects and to pass the prescribed examinations.

17. Candidates for the degree of Bachelor of Arts in combined studies may present themselves for examination in any one of the following schools of combined studies*:

(a) in the Faculty of Arts

Arabic and English
Economic history and geography
Economics and geography
Economics and history
English and fine art
English and Hebrew
English and history
English and Latin
English and music
English and Spanish
English and theology
Fine art and music
Fine art and philosophy
Geography and history
Italian and music
Latin and Spanish
Mathematics and philosophy
Music and theology
Philosophy and English literature
Philosophy and subsidiary French
Philosophy and history
Philosophy and theology
Theology and Hebrew

*Additional schools of combined studies may be added to this list from time to time.

(b) in the Faculty of Economic and Social Studies

Economics and politics
Economics and sociology
Geography and politics
Geography and sociology
Philosophy and politics
Psychology and sociology
Sociology and philosophy

## THE DEGREE OF BACHELOR OF ARTS IN SPECIAL STUDIES

18. A candidate for the degree of Bachelor of Arts in special studies shall be required to attend approved courses of study extending over not less than three academic years in one of the schools of special studies hereafter enumerated.

19. Candidates for the degree of Bachelor of Arts in special studies may present themselves for examination in any one of the following schools of special studies:

Greek language and literature
Latin language and literature
Classics
Latin with Greek
Semitic languages and literatures
English
French language and literature
French and Latin languages and literatures
Spanish language and literature
Italian language and literature
German language and literature
Russian language and literature
Modern languages and literatures
History
Philosophy
Geography
Chinese studies
Theology
†Psychology
Music
Fine art
Economics
Economics with statistics
Political studies
Sociology
Mathematics
Textile design
Textile management

[See also the regulations on pages 302 and 305.]

* Additional schools of combined studies may be added to this list from time to time.
†In abeyance; but see Bachelor of Science, page 512.

## THE DEGREE OF BACHELOR OF DIVINITY
(A postgraduate qualification)

*Graduates of the University*

20. The degree of Bachelor of Divinity may be conferred, on payment of the appropriate fee, upon registered graduates of the University, subject to the conditions contained in the following paragraphs.

21. Graduates of the University may proceed to the degree of Bachelor of Divinity not less than two years after graduation on presenting a thesis satisfactory to the Senate upon a subject approved by the Board of the Faculties of Arts, Economic and Social Studies and Law, provided that they have passed the Bachelor of Divinity qualifying examination* not less than one year before the presentation of the thesis. Candidates may also be required to pass an examination—written or oral or both—in the subject of their thesis.

*Graduates of other universities*

22. Graduates of other universities may proceed to the degree of Bachelor of Divinity:

(a) after becoming registered students of the University;

(b) after attending for not less than two years such courses of lectures in the University as the Senate, on the recommendation of the Board of the Faculties of Arts, Economic and Social Studies and Law, may require;

(c) after passing the Bachelor of Divinity qualifying examination;

(d) after presenting, not less than one year after passing the Bachelor of Divinity qualifying examination, a thesis satisfactory to the Senate upon a subject approved by the Board of the Faculties of Arts, Economic and Social Studies and Law. Candidates may also be required to pass an examination—written or oral or both—in the subject of the thesis.

[See also the regulations on pages 305-6.]

## THE DEGREE OF BACHELOR OF MUSIC
(A postgraduate qualification)

23. The degree of Bachelor of Music shall be conferred upon candidates who have attended satisfactorily the required courses and have passed the prescribed examinations.

24. Graduates of the University of Leeds who have attained Honours in the special studies course in music, or who, having read music for three years in the general studies course, are deemed eligible by the head of the department of music, may become candidates for the degree of Bachelor of Music.

25. Except with the special permission of the Senate every candidate for the degree of Bachelor of Music shall be required to present himself for examination at the end of the third term from the time when he has entered upon the course of instruction approved by the University for such a degree.

*See page 305.

26. Candidates shall not be permitted to present themselves for examination unless they have regularly attended the prescribed course of study and have performed the work of the class to the satisfaction of the professor or lecturer.

27. The names of the candidates who have passed the examinations for the degree of Bachelor of Music shall be published, the list being arranged in alphabetical order.

[See also the regulations on pages 306–7.]

## THE DEGREE OF MASTER OF ARTS

*Graduates of the University*

28. The degree of Master of Arts may be conferred, on payment of the proper fee, upon registered Bachelors of Arts, subject to the conditions contained in the following paragraphs.

29. Bachelors of Arts who have graduated with Honours, including those who have graduated with Honours in general studies, and Bachelors of Music* who are of not less than one year's standing may proceed to the degree of Master of Arts either (a) by presenting a dissertation satisfactory to the Senate on a subject approved by the Board of the Faculties of Arts, Economic and Social Studies and Law, except in the case of geography, or (b) by examination (which may include a dissertation) on a course of study approved by the Board of the Faculties of Arts, Economic and Social Studies and Law; provided that graduates who wish to proceed to the degree of Master of Arts in a subject which they have not studied as a substantial part of the course for their first degree may be required, before beginning their work, to reach a satisfactory standard in a preliminary examination in that subject.

30. Bachelors of Arts who have obtained the ordinary degree or the degree in general studies or the degree in special studies and are of not less than two years' standing may proceed to the degree of Master of Arts either (a) by presenting a dissertation satisfactory to the Senate on a subject approved by the Board of the Faculties of Arts, Economic and Social Studies and Law, or (b) by examination (which may include a dissertation) on a course of study approved by the Board of the Faculties of Arts, Economic and Social Studies and Law; provided that graduates who wish to proceed to the degree in a subject which they have not studied as a substantial part of the course for their first degree may be required before beginning their work, to reach a satisfactory standard in a preliminary examination in that subject.

Candidates accepted under article 30 shall normally be required to pass a qualifying examination in a subject upon which instruction is given in the Faculty of Arts not less than one year after the date of their acceptance, provided (a) that in special cases it shall be in the power of the Senate, on the application of the candidate and on the special recommendation of the Board of the Faculties of Arts, Economic and Social Studies and Law, to waive the qualifying

*This applies only to graduates who have taken the degree of Bachelor of Music as a first degree.

examination, and (b) that it shall be in the power of the Senate to permit a candidate proceeding by dissertation to take the qualifying examination concurrently with the presentation of the dissertation.

31. Bachelors of Arts who have shown outstanding merit in the examinations for the ordinary degree may, on the special recommendation of the Board of the Faculties of Arts, Economic and Social Studies and Law, be permitted to proceed to the degree of Master of Arts after not less than one year from the date of their graduation as Bachelors either (a) by presenting a dissertation satisfactory to the Senate on a subject approved by the Board of the Faculties of Arts, Economic and Social Studies and Law, or (b) by examination (which may include a dissertation) on a course of study approved by the Board of the Faculties of Arts, Economic and Social Studies and Law; provided that graduates who wish to proceed to the degree in a subject which they have not studied as a substantial part of the course for their first degree may be required, before beginning their work, to reach a satisfactory standard in a preliminary examination in that subject.

32. Graduates of the University other than Bachelors of Arts may become candidates for the degree of Master of Arts under the conditions laid down in article 30 for Bachelors of Arts who have obtained the ordinary degree, provided that they attend for not less than two years such courses of lectures as the Board of the Faculties of Arts, Economic and Social Studies and Law may require.

33. Any person who has qualified for the degree of Master of Arts in one subject and proceeded to the degree and has subsequently fulfilled to the satisfaction of the Senate the regulations for the degree of Master of Arts in another subject, shall be entitled to have a statement to that effect endorsed on his certificate of graduation as Master of Arts.

34. All candidates who offer a dissertation either as a sole test or in combination with other tests shall be required to present themselves for an oral examination in the subject of their dissertation, except in the case of mathematics, and to satisfy such further test as the Senate may deem expedient.

35. Certificates of attendance on courses of study in the University shall not be required in the case of Bachelor of Arts graduates of the University (Honours or Ordinary).

*Graduates of other universities*

36. Graduates or persons who have passed the final examination for a degree of another approved university and who desire to become candidates for the degree of Master of Arts may be required to present themselves for a preliminary examination before being accepted; this examination will be required in every case where graduates wish to proceed to the degree in a subject which they have not studied as a substantial part of the course for their first degree. Applicants who present evidence satisfactory to the Senate that they are qualified to pursue a course of advanced study and research, may be permitted

to enter the University and, after not less than two years of such advanced study or research, to present themselves for examination for the degree of Master of Arts.

37. Candidates admitted under the provisions of article 36 shall be required to fulfil the following conditions:

(a) To be registered as students of the University.

(b) To pursue a course of advanced study or research extending over not less than two years under the supervision of the head of the department concerned.

(c) To attend such courses of lectures at the University as the Senate, on the recommendation of the Board of the Faculties of Arts, Economic and Social Studies and Law, may require.

38. Such candidates may, at the end of their course of study, proceed to the degree of Master of Arts either (a) by presenting a dissertation satisfactory to the Senate upon a subject approved by the Board of the Faculties of Arts, Economic and Social Studies and Law, except in the case of geography, or (b) by passing an examination (which may include a dissertation) upon the subjects included in their course of study, provided

(i) that candidates who have graduated with Honours, or who have passed the final examination for a degree with Honours, shall further be required at the end of the first year of their course of study to give evidence to the Senate that their work has been satisfactory, and

(ii) that candidates who have obtained an ordinary degree, or who have passed the final examination for an ordinary degree, shall further be required at the end of the first year of their course of study to pass a qualifying examination in a subject upon which instruction is given in the Faculty of Arts; and shall not be permitted to proceed with the course until they have passed that examination.

Candidates who present a dissertation shall be required to present themselves for an oral examination in the subject of their dissertation, except in the case of mathematics, and to satisfy such further test as the Senate may deem expedient.

*Persons who are not graduates*

39. In exceptional circumstances, persons who are not graduates, or who have not passed the final examination for a degree of an approved university, may, if they satisfy the Senate that their educational attainments are adequate and that they are qualified to pursue a course of advanced study or research, be permitted to enter the University and to become candidates for the degree of Master of Arts, after not less than three years of such advanced study or research.

40. Candidates applying for admission under the provisions of the preceding paragraph shall present themselves for an examination—written and, if necessary, oral.

41. Candidates will be admitted under the provisions of articles 39 and 40 above only if they have obtained a satisfactory result in the examination

prescribed in article 40; and they will then be required to fulfil the following conditions:

(a) To be registered as students of the University.

(b) To pursue an approved course of study under the supervision of the head of the department concerned.

(c) To attend such courses of lectures at the University as the Senate, on the recommendation of the Board of the Faculties of Arts, Economic and Social Studies and Law, may require.

42. Such candidates may proceed to the degree of Master of Arts either (a) by passing an examination on a course of study approved by the Board of the Faculties of Arts, Economic and Social Studies and Law, or (b) on the recommendation of the Board of the Faculties of Arts, Economic and Social Studies and Law, except in the case of geography, by presenting a dissertation satisfactory to the Senate on a subject the title of which has already been approved by the Board of the Faculties of Arts, Economic and Social Studies and Law, provided:

(i) that at the end of the first year of their course of study they have given evidence to the Senate that their work has been satisfactory, and

(ii) that at the end of the second year of their course of study, they have passed a general examination in the subject of their study, or in the case of candidates proceeding to the degree by dissertation, in the subject within which their dissertation is presented.

At the end of their course of study candidates proceeding to the degree by means of a dissertation shall present themselves for oral examination in the subject of their dissertation, except in the case of mathematics, and satisfy such further test as the Senate may deem expedient.

*All candidates*

43. The names of candidates who have satisfied the examiners shall be arranged in alphabetical order, and distinction may be awarded for work of exceptional merit at the discretion of the examiners.

[Candidates are advised, before making application to the Registrar for acceptance for the degree, to consult the head of the department concerned with the subject they propose to study. The latest date of entry and payment of fee for all candidates for the degree of Master of Arts examination in June is 30 January. Candidates proceeding by dissertation must send in their dissertations not later than 1 May. Candidates who present a dissertation should provide at least two copies of it.]

[See also the regulations on pages 307-8.]

## THE DEGREE OF MASTER OF EDUCATION

44. The degree of Master of Education may be conferred, upon payment of the proper fee, on candidates who have fulfilled the requirements set out in the following paragraphs and who have passed the required examinations.

45. Candidates shall be graduates of the University of Leeds or of another approved university, and shall have obtained either a Graduate Certificate in Education of this or of another approved university, or a qualification which is approved by the Senate as equivalent; provided that, in exceptional circumstances, the Senate may admit as candidates persons who do not fulfil both of these conditions; such persons shall satisfy the Senate that their attainments are adequate and that they are qualified to pursue a course of advanced study and research.

46. Applicants for admission under the preceding paragraph who are not graduates, and applicants who have not obtained a Graduate Certificate in Education or its equivalent, shall present themselves for examination—written and, if necessary, oral; such applicants will be permitted to enter the University and to become candidates for the degree of Master of Education only if they have obtained a satisfactory result in the examination; and if they are not graduates, they will also be required to fulfil the following conditions:

(a) To be registered as matriculated students of the University.
(b) To pursue an approved course of study under the supervision of the head of the department of education.
(c) To attend such courses of lectures at the University as the Senate, on the recommendation of the Board of the Faculties of Arts, Economic and Social Studies and Law, may require.

47. Every candidate shall, since attaining qualified teacher status, have obtained not less than two years' experience either in approved full-time service as a teacher in a school or in some other approved educational work.

48. Candidates for the degree of Master of Education who are graduates shall pursue a course of full-time study extending over not less than two years or a course of part-time study extending over not less than three years. Candidates who are not graduates shall pursue a course of study extending over not less than three years.

49. The names of candidates who have satisfied the examiners shall be arranged in alphabetical order, and distinction may be awarded for work of exceptional merit at the discretion of the examiners.

[Candidates are advised, before making application to the Registrar for acceptance for the degree, to consult the head of the department of education. The latest date of entry and payment of fee for all candidates for the degree of Master of Education examination in June is 30 January. Candidates presenting their dissertation must send it in not later than 1 May. Candidates should provide at least two copies of their dissertation.]

## THE DEGREE OF DOCTOR OF PHILOSOPHY

50. The degree of Doctor of Philosophy may be conferred, on payment of the appropriate fee and subject to the conditions in articles 51 and 52:

(a) On persons who are registered graduates of the University of Leeds or graduates of an approved university;

(b) On the holder of a diploma awarded by an approved institution of university rank not empowered to confer degrees, provided that the course of study in the subject for which the diploma has been awarded has extended over not less than three years of full-time study;
(c) In exceptional cases on the holder of a diploma of the University of Leeds, provided that the Senate is satisfied regarding the course of study towards such diploma and the standard attained by the candidate in the examination for the diploma.

51. Except as provided in article 52 all candidates for the degree of Doctor of Philosophy are required to pursue in the University for at least two calendar years an approved full-time course of advanced study and research under the direction of the head of the department concerned or of a member of the University staff appointed by the Senate on his recommendation; provided that candidates may be permitted to devote such periods as may be deemed advisable by the Senate to full-time study and research in other approved universities or institutions, while remaining under the direction of the University or of persons nominated by the University, subject to candidates in all cases spending in the University not less than one academic year or its equivalent as determined by the Senate.

52. When laboratory work is not required for the subject of the thesis, the normal requirement of two calendar years of full-time study and research may, at the discretion of the Senate, be waived in the case of persons admitted under article 50 (a). Such candidates will be required to pursue a part-time course of advanced study and research in the University for a minimum period of three calendar years. Frequent personal contact between the supervisor and the candidate to the satisfaction of the relevant committee will be required during the period.

[Candidates who wish to avail themselves of the provisions of article 52 should normally have previously obtained a Master's degree of the University of Leeds or of some other approved university by the presentation of a thesis or dissertation. Only candidates with high qualifications who are recommended by the head of the department concerned will be accepted under article 52.]

[See also the regulations on pages 310-11].

## THE DEGREE OF DOCTOR OF LETTERS

53. The degree of Doctor of Letters shall be conferred by the University upon graduates of the University who shall be deemed by the Senate, after considering a report from the Board of the Faculties of Arts, Economic and Social Studies and Law, to have distinguished themselves by special research or learning.

54. A graduate of the University may make application for the degree of Doctor of Letters in the sixth or any subsequent year from the date of graduation.

55. If the application be approved by the Senate, the degree may be conferred at the first convenient date thereafter.

[See also the regulations on page 311.]

## THE DEGREE OF DOCTOR OF DIVINITY

56. The degree of Doctor of Divinity shall be conferred by the University upon graduates of the University who shall be deemed by the Senate, after considering a report from the Board of the Faculties of Arts, Economic and Social Studies and Law, to have distinguished themselves by special research or learning.

57. A graduate of the University may make application for the degree of Doctor of Divinity in the sixth or any subsequent year from the date of graduation.

58. If the application be approved by the Senate, the degree may be conferred at the first convenient date thereafter.

[See also the regulations on page 311.]

## THE DEGREE OF DOCTOR OF MUSIC

59. The degree of Doctor of Music shall be conferred by the University upon graduates of the University who shall be deemed by the Senate, after considering a report from the Board of the Faculties of Arts, Economic and Social Studies and Law, to have distinguished themselves by their contribution to music in composition or scholarship. In support of their application for the degree candidates must submit either two or three compositions diverse in character or a fully documented thesis embodying a substantial piece of research or contribution to scholarship, together with one composition.

60. A graduate of the University may make application for the degree of Doctor of Music in the sixth or any subsequent year from the date of graduation.

[See also the regulations on page 312.]

## DIPLOMAS AND CERTIFICATES

61. Diplomas and certificates shall be granted by the University, in such subjects as the Council may from time to time determine, to students who pursue the courses of study and pass the examinations prescribed.

62. The Council is empowered to make from time to time regulations under which such diplomas and certificates shall be awarded.

63. The award of diplomas and certificates under the provisions of this Ordinance is delegated to the Senate.

[See also the regulations on page 313.]

# REGULATIONS FOR DEGREES

## THE DEGREE OF BACHELOR OF ARTS

1. Candidates will not be admitted to courses of study for the degree of Bachelor of Arts unless they have satisfied the examination requirements for entry upon degree courses as determined by the Joint Matriculation Board.

2. All intending candidates must comply with any special requirements laid down in relation to the subjects they propose to study; for some of these a previous knowledge of certain subjects is required.

3. Candidates for the degree of Bachelor of Arts must present themselves for the departmental examinations arranged in connection with any courses they may take.

4. Candidates will not be permitted to present themselves for examination in any subject unless they have regularly attended the prescribed course of study and performed the work of the class to the satisfaction of the professor or lecturer.

5. Each examination in a modern foreign language will include an oral examination.

## THE DEGREE OF BACHELOR OF ARTS IN GENERAL STUDIES AND THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES

6. The subjects in which one-year courses of study are approved for the degrees of Bachelor of Arts in general studies and of Bachelor of Arts in combined studies in the Faculty of Arts are:

*Arabic
*Biblical studies
*Economics
English
*Fine art
French
Geography
German
Greek
*Hebrew
History
*Icelandic
*Industrial relations
*Italian
Latin
Mathematics
Music
*Philosophy
*Philosophy and history of religion
*Philosophy and history of science
*Phonetics
*Politics
*Portuguese
*Psychology
*Russian
*Sociology
*Spanish
*†Statistics

7. Candidates for the degrees of Bachelor of Arts in general studies and of Bachelor of Arts in the Faculty of Arts in combined studies in the first year of the scheme of study will be allowed to select, subject to the approval of the heads of the departments concerned, any four of the subjects listed in regulation 6, provided

*May be taken without previous study of the subject.
†May be taken for one year only.

(a) that the combination of subjects is approved by the Deans, or by the Sub-Dean or by the Tutor of Women Students acting on their behalf;

(b) that not more than one subject may be chosen from each of the following pairs

| | | |
|---|---|---|
| Hebrew | — | Arabic |
| Philosophy | — | Philosophy and history of science |
| Philosophy and history of religion | — | Biblical studies |
| Economics | — | Industrial relations |

(c) that not more than two modern foreign languages may be taken;

(d) that candidates taking two modern foreign languages must, before entering upon the course of study, have reached in one of those two languages a satisfactory standard in the advanced level examination of the General Certificate of Education or have received instruction regarded as equivalent by the head of the department concerned; and

(e) that the candidates taking mathematics and/or statistics must, before entering upon the course of study, have satisfied any necessary mathematical prerequisites (see page 526).

8. Candidates for the degree of Bachelor of Arts in combined studies in the Faculty of Economic and Social Studies* will be allowed to select in the first year of the scheme of study any four of the following subjects:

| | |
|---|---|
| Economics | Politics |
| Geography | Psychology |
| Mathematics | Sociology |
| †Introduction to Philosophy I(S) | |

9. Candidates for the degree of Bachelor of Arts in general studies shall take in the second and third years of the scheme of study one of the following five groups of subjects:

(i) English, history and one other subject
(ii) English, a language other than English, and one other subject
(iii) Geography, history and one other subject
(iv) Two languages other than English, and one other subject
(v) English, geography and one other subject

provided

(a) that one-year courses in all three subjects were taken in the first year of the scheme of study, and the prescribed examinations passed; and

(b) that Greek and Latin may not be taken together.

*With the permission of the heads of the two departments concerned, students who have satisfactorily completed a first-year course in special or general studies in the Faculties of Arts or Economic and Social Studies may be accepted into the second year of a combined studies scheme in the Faculty of Economic and Social Studies.

† Available in and after October, 1965.

The third subject referred to in each of the five groups above shall be selected from the following list:

| | |
|---|---|
| Arabic | Italian |
| Biblical studies | Latin |
| English | Mathematics |
| Fine art | Philosophy |
| French | Philosophy and history of religion |
| German | Philosophy and history of science |
| Greek | Phonetics |
| Hebrew | Portuguese |
| History of religion* | Russian |
| Icelandic | Spanish |

10. Any course extending over one year for the degree of Bachelor of Arts in special studies may, with the approval of the Board of the Faculties of Arts, Economic and Social Studies and Law, be accepted as a one-year course for the degree of Bachelor of Arts in general studies or in combined studies.

11. The examinations will ordinarily be held in June of each year. Supplementary examinations on one-year courses will also be held in September, but except with the special permission of the Senate, a candidate will not be admitted to the September examination on any such course unless:

(a) he has presented himself for the corresponding examination in the preceding June,

(b) he has attained an appropriate standard in the June examinations as a whole.

The last date for entry for examinations is 29 January.†

12. Except with the special permission of the Board of the Faculties of Arts, Economic and Social Studies and Law, candidates must have passed at the end of their first year of study the examination in the four subjects of the first year of the course in order to be permitted to proceed to the second year of the course either in general studies or in combined studies. In cases where permission is granted, a candidate taking a first-year course in a subject in the second year of study must pass the examination in this subject:

(a) in June, if it is a subject in which he failed in the previous session, or

(b) in June or September, if the subject is not one of those in which he was examined in the previous session provided that a candidate will not be allowed to take the September examination unless he has attained an appropriate standard in the June examination in that subject.

Only with the special permission of the Senate will a candidate be permitted to present himself for examination on a first-year course in the third year of study, or in September of the second year of study if the subject is one in which he failed in the previous session.

13. Each candidate will be placed under the supervision of a tutor. Candidates are required to consult with their tutors at the beginning and end of each term.

*Must be preceded by the first-year course in Philosophy and history of religion.

†See also the general regulations for examinations on page 248.

## THE DEGREE OF BACHELOR OF ARTS IN SPECIAL STUDIES

14. In schools of special studies for which a qualifying examination at the end of the first year of study is prescribed, such examinations will ordinarily be held in June of each year; but a candidate who does not pass in all the required subjects of a qualifying examination may be admitted to supplementary examinations held in September in the subject or subjects in which he has failed. Except with the special permission of the Senate, no candidate will be accepted for a September examination unless (a) he has presented himself for the corresponding examination in the preceding June and (b) he has attained an appropriate standard in the June examinations as a whole. In some schools of special studies a candidate who fails to pass in all the required subjects in the first year of study may be permitted to take a first-year course in a subject in a second year of study. In these cases, the candidate will not be admitted to the September examination unless he has attained an appropriate standard in the June examination in that subject.

15. Except with the special permission of the Senate no candidate will be allowed to present himself for the final examination for the degree unless he has passed the required examinations on first-year courses not later than the preceding September.

16. The final examinations will ordinarily be held in June of each year. The last date for entry for examination is 29 January.

[See also the prescribed schemes of study on pages 336 and fol.]

## THE DEGREE OF BACHELOR OF DIVINITY
(A postgraduate qualification)

*Graduates of the University*

17. In all cases candidates wishing to present a thesis connected with Old Testament studies must, before acceptance as candidates for the degree, have passed an examination in Hebrew of a standard equivalent to that required of candidates taking Hebrew as a three-year subject for the degree of Bachelor of Arts. Similarly, candidates wishing to present a thesis connected with New Testament studies must, before acceptance as candidates for the degree, have passed an examination in Greek of a standard equivalent to that required of candidates taking Greek as a three-year subject for the degree of Bachelor of Arts.

The qualifying examination for the degree consists of the following subjects:

Old Testament history, literature and religion with or without Hebrew language and literature (2 papers, either in Old Testament alone, or in Hebrew and Old Testament)
New Testament language and literature (2 papers)
Church history (2 papers)
Biblical and historical theology (2 papers)
The philosophy of religion (2 papers) *or*
The history of religion (2 papers) *or*
The philosophy of religion (1 paper) *and*
The history of religion (1 paper)

The syllabus is that prescribed for the relevant subjects for the degree of Bachelor of Arts in special studies in theology. The first part of the examination in each subject may be taken in one year and the second in the subsequent year. Candidates who divide the examination must take the appropriate papers for the degree of Bachelor of Arts in special studies in theology.

18. Candidates for the qualifying examination will be excused those subjects or parts of subjects in which they have passed in their degree examination.

*Graduates of other universities*

19. In all cases candidates wishing to present a thesis connected with Old Testament studies must, before acceptance as candidates for the degree, have passed an examination in Hebrew of a standard equivalent to that required of candidates taking Hebrew as a three-year subject for the degree of Bachelor of Arts of the University. Similarly, candidates wishing to present a thesis connected with New Testament studies must, before acceptance as candidates for the degree, have passed an examination in Greek of a standard equivalent to that required of candidates taking Greek as a three-year subject for the degree of Bachelor of Arts of the University.

20. Candidates for the qualifying examination [regulation 17 above] will be excused those subjects or parts of subjects in which they have passed the equivalent in their degree.

*All candidates*

21. A candidate must not submit as his thesis one for which a degree has been awarded in the University of Leeds or in any other university, or which is under consideration for the award of a degree in another university; but he will not be precluded from incorporating in his thesis any part of such work provided that he states his desire to do so at the time of his application for acceptance as a candidate and in the thesis itself indicates the part of the work so incorporated.

The thesis, which must be submitted not later than 1 May, should be typewritten and at least two copies should be supplied. The last date for entry for examinations in June is 29 January.

## THE DEGREE OF BACHELOR OF MUSIC
(A postgraduate qualification)

22. Candidates for the degree of Bachelor of Music must pursue courses of study and present themselves for examination.

23. The examination will consist of the following six written papers:

| | |
|---|---|
| Composition | 1 paper |
| Counterpoint | 1 paper |
| Fugue | 1 paper |
| Orchestration | 1 paper |
| History and criticism | 1 paper |
| Essay | 1 paper |

together with an oral examination and practical tests. In addition an original musical exercise must be submitted.

24. This examination will ordinarily be held in June.

25. At the beginning of the year, each candidate for the degree of Bachelor of Music must submit to the head of the department proposals for the original musical exercise which he is required to offer. This exercise, which must be the unaided work of the candidate and which should take at least twenty minutes to perform, must consist of one of the following:

(a) a work for chamber combination of not fewer than four instruments
(b) a work for orchestra
(c) a work for orchestra and voices.

The manuscript must be submitted not later than 1 May in the year in which the candidate is taking the examination; if the candidate is successful the exercise will be retained by the University.

## THE DEGREE OF MASTER OF ARTS

26. Subject to the provisions of articles 28 to 43 of Ordinance II candidates for the degree of Master of Arts who are permitted to proceed to the degree by examination must present themselves for examination in one of the following subjects*:

Greek, Latin, Semitic languages and literatures, theology, English, French, German, Italian, Russian, Spanish, history, geography, philosophy, economics, sociology, politics, psychology, music, mathematics.

27. The preliminary examination for graduates who apply to be accepted under the provisions of article 29 or article 36 of the Ordinance and who wish to proceed to the degree of Master of Arts in a subject which they have not studied as a substantial part of the course for their first degree will consist of not less than two written papers and an oral examination. To pass the examination a candidate must reach a standard equal to that at which Honours are awarded in the examinations for the degree of Bachelor of Arts.

28. Persons who are not graduates and who apply to become candidates for the degree under the provisions of articles 39 to 42 must:

(a) Present themselves for interview by a committee of the Board of the Faculties of Arts, Economic and Social Studies and Law, and subsequently take an examination designed as a test of fitness to proceed to study for a higher degree; this will not necessarily be confined to the subject in which the candidate wishes to proceed and will consist of:
  (i) A total of at least two written papers in not less than two separate subjects approved by the Board
  (ii) An essay
  (iii) An oral examination.
  It shall be in the discretion of the committee to exempt an applicant from the oral examination.

*Examination syllabuses are given on page 382.

(b) Attend for supervised study in the University in the first year of their course on at least two days a week for a total of not less than six hours a week; and in subsequent years on at least two days a week for a total of not less than four hours a week if preparing a thesis, or a total of not less than six hours a week if proceeding to the degree by examination. In special cases the above attendance requirements may be modified by the Board on the recommendation of the standing committee concerned.

29. Graduates or persons who have passed the final examination for a degree of another university, and who are accepted as candidates for the degree under the provisions of articles 36 to 38, whether by thesis or examination, must attend in the University in the first and second years of study for frequent consultation with the head of the department or the supervisor to the satisfaction of the Board of the Faculties of Arts, Economic and Social Studies and Law.

30. The qualifying examination for candidates accepted under articles 30 and 36 will consist of not less than two written papers and may also include an oral examination.

31. Candidates presenting a dissertation must present themselves for an oral examination in the subject of their dissertation, except in the case of mathematics, and satisfy such further test as the Senate may deem expedient.

32. A candidate must not submit as his dissertation one for which a degree has been awarded in the University of Leeds or in any other university, or which is under consideration for the award of a degree in another university; but he will not be precluded from incorporating in his dissertation any part of such work provided that he states his desire to do so at the time of his application for acceptance as a candidate and in the dissertation itself indicates the part of the work so incorporated. A copy of the dissertation approved for the degree will be retained in the University library.

## THE DEGREE OF MASTER OF EDUCATION

33. All candidates must undertake studies in education which shall include:

(a) Theory of education and educational psychology, each for two years.

(b) Two of the following, one in the first year of the course and one in the second year, the subjects to be selected in consultation with the head of the department of education:

(i) History of education
(ii) Educational administration
(iii) Sociology of education
(iv) Comparative education
(v) Statistical methods applied to education.

Not all the subjects in this list will necessarily be available in any one year, and new subjects may be added from time to time.

34. All candidates must attend for tuition in the first and second years of the course. At the end of each year they will be required to present themselves for examination on the subjects of their study. Each examination will consist of one paper on each of the following: Theory of education, educational psychology, and one other subject; together with such other tests—written or oral—as may be prescribed by the examiners from time to time. No candidate who fails the examination at the end of the first year will be allowed to proceed with the course; and no part-time candidate who fails the examination at the end of the second year will be allowed to proceed to the dissertation.

All candidates will be required in addition to prepare a dissertation upon a subject approved by the Board of the Faculties of Arts, Economic and Social Studies and Law, and they must also present themselves for examination—written and, if necessary, oral—on the subject of the dissertation.

Full-time students will prepare this dissertation during the first two years of the course. Part-time students will normally prepare the dissertation after passing the examination at the end of the second year of the course.

In the award of a degree, consideration will be given to the candidate's results in the first-year and second-year examinations, to the dissertation and to his performance in the examination on the subject of the dissertation.

35. Persons who are not graduates and who apply to become candidates for the degree must:

(a) present themselves for interview by a standing committee of the Board of the Faculties of Arts, Economic and Social Studies and Law and subsequently take an examination designed as a test of fitness to proceed to study for a higher degree; this will not necessarily be confined to the subject in which the candidate wishes to proceed and will consist of:

(i) a total of at least two written papers in not less than two separate subjects approved by the Board
(ii) an essay
(iii) an oral examination.

It shall be in the discretion of the committee to exempt an applicant from the oral examination.

(b) attend for supervised study in the University in the first and second years of their course for a total of not less than four hours a week. In special cases the above attendance requirements may be modified by the Board on the recommendation of the standing committee.

36. The examination for graduates who have not obtained a Graduate Certificate in Education or an equivalent qualification and who wish to become candidates for the degree of Master of Education will include an essay paper and an oral examination.

## THE DEGREE OF DOCTOR OF PHILOSOPHY

37. Before entering on the course of advanced study and research, candidates must:

(a) Submit to the Senate for its approval the course of advanced study and research proposed by them and present evidence satisfactory to the Senate that they are qualified to undertake the proposed course.

(b) Register as students of the University and pay the prescribed fees for tuition.

38. Except with the special permission of the Senate, no candidate for the degree of Ph.D. may submit a thesis later than five years if engaged in full-time study, or later than seven years in part-time study, from the date of registration for the degree.

39. On completing the course of advanced study and research candidates must:

(a) Present a thesis on the subject of their advanced study and research, and satisfy the examiners that it contains original work worthy of publication, and that it is of a sufficient standard of merit to qualify for the degree of Doctor of Philosophy.

(b) Present themselves for an oral examination, except in the case of mathematics, on matters relevant to their thesis and, if required, for a written examination and satisfy the examiners in the examination as well as in the thesis presented.

40. The application of a candidate for admission to the course for the degree must give particulars of his educational career and qualifications as well as the subject of his proposed course of advanced study and research. The application should be addressed to the Registrar.

A candidate is advised, before making application to the Registrar, to consult the head of the department which is concerned with the subject he proposes to study.

41. A candidate during his course must devote his whole time to his advanced study and research; but in exceptional cases the Senate is prepared to allow the candidate to undertake a limited amount of outside work which, in its judgment, would not interfere with the prosecution of his proposed course of advanced study and research.

42. A candidate must not submit as his thesis one for which a degree has been conferred upon him in the University of Leeds or in any other university; but he will not be precluded from incorporating in his thesis any part of the work already submitted by him with a view to a degree for which he has been a successful candidate, provided that in his application to the University for admission to the course he states his desire to do so, and in the thesis itself indicates the part of the work which has been so incorporated.

43. It will be generally convenient that the candidate's course should begin at the opening of the academic year in October; but the Senate is prepared to consider applications for leave to begin the course at some other time. The course must in any case extend over at least two calendar years.

44. Not less than three months before the completion of his course the candidate must make application to the Registrar to be examined. Thereafter, but not more than six weeks before the end of the course, the candidate must submit two copies of a thesis which must be accompanied by a short abstract. Theses must be bound in a standard form, particulars of which may be obtained from the Registrar. A copy of the thesis approved for the degree will be retained in the University library.

Normally there will be a period of six to eight weeks between the submission of the thesis and the announcement of the result of the examination.

## THE DEGREE OF DOCTOR OF LETTERS

45. All applications must be made in writing to the Registrar and contain a full statement of the grounds on which the claim for the degree is based, together with three copies of any thesis, whether in print or in manuscript, which the applicant may desire to submit in support of the application. A copy of the thesis approved for the degree will be retained in the University library.

46. A candidate must not submit in chief or sole support of his application for the degree a thesis for which a degree has been awarded in the University of Leeds or any other university, or which is under consideration for the award of a degree in another university; but he will not be precluded from submitting in additional support of his application a thesis for which a degree has already been awarded or from incorporating (in whole or in part) such work in the thesis submitted, provided he clearly indicates the work thus submitted or incorporated.

The application must be accompanied by the prescribed fee.

## THE DEGREE OF DOCTOR OF DIVINITY

47. All applications must be made in writing to the Registrar and contain a full statement of the candidate's academic record and any other qualifications on which the application for the degree is based, together with two or more copies of the published work or works whether in print or in typescript which the candidate may desire to submit in support of the application. A copy of the work or works approved for the degree will be retained in the University library.

48. A candidate must not submit in chief or sole support of his application for the degree a thesis for which a degree has been awarded in the University of Leeds or in any other university, or which is under consideration for the award of a degree in another university; but he will not be precluded from submitting in additional support of his application a thesis for which a degree has already been awarded or from incorporating (in whole or in part) such work in the thesis submitted, provided he clearly indicates the work thus submitted or incorporated.

The application must be accompanied by the prescribed fee.

## THE DEGREE OF DOCTOR OF MUSIC

49. All applications must be made in writing to the Registrar and contain a full statement of the candidate's academic record and any other qualifications on which the application for the degree is based, together with two copies of the works or work and thesis which the candidate may desire to submit in support of the application. A copy of the thesis and of the work or works approved for the degree will be retained in the University library.

50. A candidate must not submit in chief or sole support of his application for the degree a composition or thesis for which a degree has been awarded in the University of Leeds or in any other university, or which is under consideration for the award of a degree in another university; but he will not be precluded from submitting in additional support of his application a composition or thesis for which a degree has already been awarded or from incorporating (in whole or in part) such work in that submitted, provided he clearly indicates the work thus submitted or incorporated.

# REGULATIONS FOR DIPLOMAS AND CERTIFICATES

51. Candidates for diplomas must give satisfactory attendance upon all the subjects which form part of their course of study, and present themselves for class examinations. Those who do not pass these examinations satisfactorily in any year will be disqualified for the diploma unless they repeat the course in whole or in part, as may be required by the Senate.

52. At the close of the course candidates must present themselves for such examination in the main subject of study as may be prescribed.

53. Some deviation from the courses may be sanctioned in special cases, and students who on entering upon a diploma course produce evidence that they possess a sufficient knowledge of the work done during a part of the course will be allowed to dispense with a certain amount of attendance. Applications for exemption from attendance should be made to the head of the department concerned who shall bring them before the standing committee of the Senate appointed to deal with such matters.

Courses are provided leading to the following diplomas and certificates:

Diploma in Hebrew
Certificate in the teaching of Hebrew
Certificate in Arabic
Diploma in Spanish
Certificate in Russian
Diploma in theology
Postgraduate diploma in Semitic studies
Postgraduate diploma in English studies
Postgraduate diploma in English as a second language
Postgraduate diploma in folk life studies
Graduate certificate in education
Graduate certificate in educational studies
Postgraduate diploma in health service administration.

Detailed regulations governing courses of study and examination requirements for the postgraduate diploma in industrial management and the diploma in development administration will be found on page 441, for the diploma in the history and philosophy of science on page 520, and for the remainder of the above qualifications on pages 387 and fol.

Courses are also provided for the following diplomas of the University of Leeds Institute of Education:

The diploma in primary education
secondary education
the education of backward children
physical education
religious education
curricular studies for overseas teachers

The professional certificate (or graduate professional certificate) for overseas teachers

The certificate (or graduate certificate) in the teaching of English as a second language.

Particulars and regulations will be found in the *Handbook* of the Institute of Education.

# REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES

Candidates should note that in order to qualify for admission to a scheme of study for a first degree in the University, they must satisfy both a *General Requirement* and a *Course Requirement*. For information regarding the *General Requirement*, for purposes of matriculation, candidates should write to The Secretary, Joint Matriculation Board, Manchester 15. The *Course Requirement* is set out at the beginning of the regulations for each degree scheme of study in the Faculty of Arts.

**GENERAL/COMBINED STUDIES:** Candidates wishing to read for a degree in combined studies in the Faculty of Arts must apply in the first instance for admission to general studies. (*See* regulations 6-12, pages 302-4).

## *Course Requirement*

For admission to the general studies scheme passes in two approved subjects at advanced level are required and a third is preferred. These passes may be in any approved subject. For subsequent entry into certain combined studies schemes, a pass at advanced level in a specified subject may be required.

**COMBINED STUDIES:** Schemes of study leading to the degree of Bachelor of Arts in combined studies are set out below. Candidates will spend the first year of study following a general studies scheme of four subjects. After successful completion of the first year candidates may make application to enter a combined studies scheme to read two of these subjects for a further two years. Alternatively they may continue in a general studies scheme reading three subjects. (Under certain conditions transfer to special studies may be permitted).

**ARABIC AND ENGLISH:** Three schemes of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in Arabic and English.

## *Course Requirement*

This will be the same as set out above. Candidates will normally be required before entering upon the combined studies scheme to have passed in Arabic Ix at the end of the first year of study in the University.

## *Final Examination*

*SCHEME A*

1. Koran and Arabic poetry
2. Classical and modern Arabic prose

3. Translation into Arabic, with questions on grammar and stylistics
4. Arabic history and historical development of the language
5. Shakespeare and Elizabethan drama
6. English poetry: Elizabethan period to the present day
7. English prose and novel: Elizabethan period to the present day
8. *Either* Milton
   *or* Another special author
   *or* Criticism
9. Candidates will be required to submit not later than 1 May an essay of 8,000 to 10,000 words on a subject which may relate to Arabic or to English or to some topic combining both these subjects. The title should be submitted to the heads of the combined studies school for approval at the beginning of the third year of the scheme.

*SCHEME B*

1. Koran and Arabic poetry
2. Classical and modern Arabic prose
3. Translation into Arabic, with questions on grammar and stylistics
4. Arabic history and historical development of the language
5. History of the English language
6. Middle English literature
7. English literature: Shakespeare to Dryden
8. English literature: Pope to Byron
9. Essay (as for Scheme A).

*SCHEME C*

1. Koran and Arabic poetry
2. Classical and modern Arabic prose
3. Translation into Arabic, with questions on grammar and stylistics
4. Arabic history and historical development of the language
5. *Either* Contemporary English language
   *or* Phonetics and linguistics
6. Style and rhetoric (English)
7. English literature: Shakespeare to Dryden
8. English literature: Pope to Byron
9. Essay (as for Scheme A).

**ECONOMIC HISTORY AND GEOGRAPHY:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in Economic History and Geography.

*Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 315.

*Final Examination*

1. Human geography
2. Physical geography
3. Historical geography of Europe (including the British Isles)
4. Regional geography (British Isles or one major world area)
5. English economic history 1066-1914
6. Recent economic history (The British economy since 1914, and the economic history of great powers since 1870)
7. Economic theory
8. Special period or topic in economic history, selected from the following:
   (a) Seventeenth-century English economic history
   (b) Early nineteenth-century English economic history
   (c) Late nineteenth-century English economic history.
9. *Either* An additional special period or topic in economic history selected from the above
   *or* *One* of the following papers in geography:
   Urban geography
   Development of geographical thought
   Problems of the geography of population
   Problems of economic geography
   Problems of political geography
   Geography of planning.

All candidates will be required to attend a course in cartography and field excursions, as directed, in the department of geography, as an integral part of the degree requirements.

**ECONOMICS AND GEOGRAPHY:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in Economics and Geography.

*Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 315.

*Final Examination*

The final examination will consist of nine papers: *either* four geography and five economics *or* four economics and five geography.

1. Human geography
2. Physical geography
3. Regional geography: one major world area
4. Problems of economic geography
5. Economic theory

6.
7. } Two papers selected from the following:

Industry and industrial relations
Money and finance
Recent economic history

8. A special subject in economics.
9. *Either*

An additional special subject in economics
*or*
One of the following papers in geography:
Urban geography
Problems of political geography
Geography of planning
Regional geography: one major world area.

All candidates will be required to attend a course in cartography and field excursions, as directed in the department of geography, as an integral part of the degree requirements.

**ECONOMICS AND HISTORY:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in Economics and History.

*Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 315.

*Final Examination*

1. The history of Britain from earliest times to 1399
2. The history of Britain, 1399 to 1688
3. The history of Britain from 1688
4. Economic theory
5. *Either* Industry and industrial relations
   *or* Money and finance
6. English economic history 1066-1914
7. Recent economic history (The British economy since 1914, and American economic history)
8. *One* of the following:*
   History of the United States of America from 1783
   Religion and the State in Western Europe, 1500 to 1650
   The history of Europe 1660-1815
   The history of Europe 1815-1918
9. A special period in history *or* economic history.

*Not all these subjects will necessarily be offered each year, and the list may be varied from time to time.

**ENGLISH AND FINE ART:** Two schemes of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in English and Fine Art.

*Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 315.

*Final Examination*

*SCHEME A*

1. Shakespeare and Elizabethan drama
2. English poetry: Elizabethan period to the present day
3. English prose and novel: Elizabethan period to the present day
4. *Either* Milton
   *or* Another special author
   *or* Criticism
5. History of painting, sculpture and architecture—Paper
6. History of painting, sculpture and architecture—Paper II
7. Art criticism
8. Oral examination (fine art)
9. Candidates will be required to submit not later than 1 May an essay of 8,000 to 10,000 words on a subject which may relate to English or to fine art or to some topic combining both these subjects. The title should be submitted to the heads of the combined studies school for approval at the beginning of the third year of the course.

*SCHEME B*

1. History of the English language
2. Middle English literature
3. English literature: Shakespeare to Dryden
4. English literature: Pope to Byron
5. History of painting, sculpture and architecture—Paper I
6. History of painting, sculpture and architecture—Paper II
7. Art criticism
8. Oral examination (fine art)
9. Candidates will be required to submit not later than 1 May an essay of 8,000 to 10,000 words on a subject which may relate to English or to fine art or to some topic combining both these subjects. The title should be submitted to the heads of the combined studies school for approval at the beginning of the third year of the course.

**ENGLISH AND HEBREW:** Three schemes of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in English and Hebrew.

## *Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 315.

## *Final Examination*

*SCHEME A*

1. English poetry: Elizabethan period to the present day
2. English prose and novel: Elizabethan period to the present day
3. Shakespeare and Elizabethan drama
4. *Either* Milton
   *or* Another special author
   *or* Criticism
5. Hebrew: Old Testament: prose and poetry
6. Hebrew: Post-biblical to modern
7. Translation into classical and modern Hebrew, with questions on grammar and style
8. Hebrew history and the historical development of the language
9. Candidates will be required to submit not later than 1 May an essay of 8,000 to 10,000 words on a subject which may relate to English or to Hebrew or to some topic combining both these subjects. The title should be submitted to the heads of the combined studies school for approval at the beginning of the third year of the scheme.

*SCHEME B*

1. History of the English language
2. Middle English literature
3. English literature: Shakespeare to Dryden
4. English literature: Pope to Byron
5. Hebrew: Old Testament: prose and poetry
6. Hebrew: post-biblical to modern
7. Translation into classical and modern Hebrew, with questions on grammar and style
8. Hebrew history and the historical development of the language
9. Essay (as for Scheme A).

*SCHEME C*

1. *Either* Contemporary English language
   *or* Phonetics and linguistics
2. Style and rhetoric (English)
3. English literature: Shakespeare to Dryden
4. English literature: Pope to Byron
5. Hebrew: Old Testament: prose and poetry
6. Hebrew: post-biblical to modern
7. Translation into classical and modern Hebrew, with questions on grammar and style
8. Hebrew history and the historical development of the language
9. Essay (as for Scheme A).

**ENGLISH AND HISTORY:** Two schemes of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in English and History.

## *Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 315.

## *Final Examination*

*SCHEME A*

1. Shakespeare and Elizabethan drama
2. Poetry: Elizabethan period to the present day
3. Prose and the novel: Elizabethan period to the present day
4. American literature from Emerson to the present day
5. History of Britain from 1399 to 1688
6. History of Britain from 1688
7. History of the United States of America from 1783
8. *One* of the following:*
   - History of political thought
   - History of scientific thought
   - Religion and the State in Western Europe, *c.*1500 to *c.*1650
   - History of Europe, 1660 to 1815
   - History of Europe, 1815 to 1918
9. An essay of 8,000 to 10,000 words on a subject relating to one of the candidate's prescribed fields of study, chosen with the advice of the department concerned, to be submitted not later than 1 May.

*SCHEME B*

1. History of the English language
2. Middle English literature
3. English literature: Shakespeare to Dryden
4. English literature: Pope to Byron
5. History of Britain from earliest times to 1399
6. History of Britain from 1399 to 1688
7. History of Britain from 1688
8. *One* of the following:*
   - History of political thought
   - The Carolingians
   - The Church in the later Middle Ages
   - Religion and the state in Western Europe, *c.*1500 to *c.*1650
   - The history of Europe, 1660 to 1815
9. An essay of 8,000 to 10,000 words on a subject relating to one of the candidate's prescribed fields of study, chosen with the advice of the department concerned, to be submitted not later than 1 May.

*Not all of these subjects will necessarily be offered each year, and the list may be varied from time to time.

**ENGLISH AND LATIN:** Three schemes of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in English and Latin.

*Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 315.

*Final Examination*

*SCHEME A*

1. Shakespeare and Elizabethan drama
2. English poetry: Elizabethan period to the present day
3. English novel and prose: Elizabethan period to the present day
4. *Either* Milton
   *or* Another special author
   *or* Criticism
5. Candidates will be required to submit not later than 1 May an essay of 4,000 to 5,000 words on an approved subject in the field of English
6. Latin unprepared translation and prose composition
7. Latin literature: prescribed books I
8. Latin literature: prescribed books II
9. *Two* of the following:*
   Latin (a) Tragedy
   (b) Comedy
   (c) Epic
   (d) Pastoral poetry
   (e) Satire
10. Latin general paper.

*SCHEME B*

1. History of the English language
2. Middle English literature
3. English literature: Shakespeare to Dryden
4. English literature: Pope to Byron
5. Essay (as for Scheme A)
6. Latin unprepared translation and prose composition
7. Latin literature: prescribed books I
8. Latin literature: prescribed books II
9. *Two* of the following:*
   Latin (a) Tragedy
   (b) Comedy
   (c) Epic
   (d) Pastoral poetry
   (e) Satire
10. Latin general paper.

*Not all of these subjects will be offered each year, and the list may be varied from time to time.

*SCHEME C*

1. *Either* Contemporary English language
   *or* Phonetics and linguistics
2. Style and rhetoric (English)
3. English literature: Shakespeare to Dryden
4. English literature: Pope to Byron
5. Essay (as for Scheme A)
6. Latin unprepared translation and prose composition
7. Latin literature: prescribed books I
8. Latin literature: prescribed books II
9. *Two* of the following:*
   Latin (a) Tragedy
   (b) Comedy
   (c) Epic
   (d) Pastoral poetry
   (e) Satire
10. Latin general paper.

**ENGLISH AND MUSIC:** Two schemes of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in English and Music.

## *Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 315.

## *Final Examination*

*SCHEME A*

Shakespeare and Elizabethan drama
English poetry: Elizabethan period to the present day
English prose and novel: Elizabethan period to the present day
*Either* Milton
*or* Another special author
*or* Criticism
History of music since 1880
Harmony and counterpoint
Special subject (music)
Acoustics†
Practical and oral examinations in music
Candidates will be required to submit not later than 1 May an essay of 8,000 to 10,000 words on a subject which may relate to English literature

*These subjects may be varied from time to time.

†This course is given in alternate years and candidates will take the examination at the end of the year in which they attend the course.

or to music or to some topic combining both these subjects. The title should be submitted to the heads of the combined studies school for approval at the beginning of the third year of the course.

*SCHEME B*

History of the English language
Middle English literature
English literature: Shakespeare to Dryden
English literature: Pope to Byron
History of music since 1880
Harmony and counterpoint
Special subject (music)
Acoustics*
Practical and oral examinations in music

Candidates will be required to submit not later than 1 May an essay of 8,000 to 10,000 words on a subject which may relate to English or to music or to some topic combining both these subjects. The title should be submitted to the heads of the combined studies school for approval at the beginning of the third year of the course.

**ENGLISH AND SPANISH:** Two schemes of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in English and Spanish.

## *Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 315.

Candidates shall normally be required before entering upon the first year of study to have reached a suitable standard in Spanish at the advanced level in a General Certificate of Education or equivalent examination, and to have passed in one or preferably two other subjects at the advanced level.

## *Scheme of Study*

Candidates will be required to spend a period of at least one month in Spain during the long vacation of their first or second year, this period to include attendance at an approved course of study.

## *Final Examination*

*SCHEME A*

1. Shakespeare and Elizabethan drama
2. English poetry: Elizabethan period to the present day
3. English prose and novel: Elizabethan period to the present day

*This course is given in alternate years and candidates will take the examination at the end of the year in which they attend the course.

4. *Either* Milton
   *or* Another special author (English)
   *or* Criticism (English)
5. Translation into Spanish
6. Translation from Spanish and essay (Spanish)
7. Golden Age literature (Spanish)
8. Twentieth-century Spanish and Spanish-American literature
9. Special subject (modern Spanish literature)

In addition, candidates will be required to present by 1 May in their final year an essay (in English, about 8,000 words) on an approved topic within the field of English or Spanish, or combining both subjects; and will be required to present themselves for an oral examination in Spanish.

*SCHEME B*

1. History of the English language
2. Middle English literature
3. English literature: Shakespeare to Dryden
4. English literature: Pope to Byron
5. Translation into Spanish
6. Translation from Spanish and essay (Spanish)
7. Golden Age literature (Spanish)
8. Twentieth-century Spanish and Spanish-American literature
9. Special subject (modern Spanish literature)

In addition, candidates will be required to present by 1 May in their final year an essay (in English, about 8,000 words) on an approved topic within the field of English or Spanish, or combining both subjects; and will be required to present themselves for an oral examination in Spanish.

**ENGLISH AND THEOLOGY:*** Two schemes of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in English and Theology.

## *Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 315.

## *Final Examination*

*SCHEME A*

1. Poetry (Elizabethan to 20th century)
2. Novel and prose
3. Shakespeare and Elizabethan drama

*English and *either* Biblical studies *or* Philosophy and history of religion must be included among the subjects studied in the first year.

4. *Either* Milton
   *or* Criticism
   *or* Special author
5. Old Testament (with English text)
6. New Testament (with prescribed text in Greek)
7. Biblical and historical theology
8. *Either* Philosophy of religion
   *or* Comparative study of religions
   *or* Church history.

In addition candidates will be required to submit not later than 1 May, an essay of 8,000 to 10,000 words on a subject which may relate to theology or English or to some topic combining both these subjects. The title should be submitted to the heads of the combined studies school for approval at the beginning of the third year.

*SCHEME B*

1. History of English literature: Shakespeare to Dryden
2. History of English literature: Pope to Byron
3. Middle English literature
4. History of the English language
5. Old Testament (with English text)
6. New Testament (with a prescribed text in Greek)
7. Biblical and historical theology
8. *Either* Philosophy of religion
   *or* Comparative study of religions
   *or* Church history.

In addition, candidates will be required to submit, not later than 1 May, an essay of 8,000 to 10,000 words on a subject which may relate to theology or English or to some topic combining both these subjects. The title should be submitted to the heads of the combined studies school for approval at the beginning of the third year of the course.

**FINE ART AND MUSIC:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in Fine Art and Music.

## *Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 315.

## *Final Examination*

History of painting, sculpture and architecture (2 papers)
History of ideas and institutions connected with the arts (1 paper)
History of music since 1880 (1 paper)

Harmony and Counterpoint (2 papers)
Special subject (music) (1 paper)
Acoustics*
Practical and oral examinations in music

In addition candidates will be required to submit, not later than 1 May, an essay of about 8,000 words on a subject which may relate to music or to fine art or to some topic combining these subjects. The title should be submitted to the heads of the combined studies school for approval at the beginning of the third year of the course.

**FINE ART AND PHILOSOPHY:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in Fine Art and Philosophy.

### *Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 315.

### *Scheme of Study*

The scheme of study for the first academic year shall normally be the same as that of students reading for the degree of Bachelor of Arts in general studies provided that it includes philosophy and fine art among the first-year subjects. A qualifying examination in these subjects which must normally be passed by candidates before they proceed to further study will be held at the end of the first year. Subject to the approval of the Board of the Faculties of Arts, Economic and Social Studies and Law, suitably qualified candidates may be permitted to vary the course of study required for the first year.

During the second and third years candidates shall be required to attend approved courses in philosophy and fine art and to submit written work as directed.

### *Final Examination*

1. Logic and general philosophy
2. The history of *either* ancient and medieval *or* modern philosophy
3. Political and social philosophy *or* ethics
4. Aesthetics
5. A special subject to be chosen with the approval of the heads of the departments of philosophy and fine art †
6. History of painting, sculpture and architecture, 1600–1750.

*This course is given in alternate years and candidates will take the examination at the end of the year in which they attend the course.

†With the approval of the heads of the departments concerned, the special subject may be examined by dissertation.

7. History of painting, sculpture and architecture, 1750 to the present day, *or* history of medieval art*
8. History of ideas and institutions connected with the fine arts.

In addition candidates must present themselves for an oral examination.

**GEOGRAPHY AND HISTORY:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in Geography and History.

### *Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 315.

### *Final Examination*

The final examination will consist of nine papers; *either* four geography and five history *or* four history and five geography.

Geography

1. Human geography
2. Physical geography
3. Historical geography of Europe (including the British Isles)
4. Regional geography (British Isles or one major world area)
5. *One* of the following:
   - Urban geography
   - Development of geographic thought
   - Problems of the geography of population
   - Problems of economic geography
   - Problems of political geography
   - Regional geography: one major world area.

Candidates, if they are taking four geography papers, will offer numbers 1, 2, 3 and 4; *or* if they are taking five geography papers, numbers 1, 2, 3, 4 and 5.

All candidates will be required to attend a course in cartography and field excursions, as directed, in the department of geography as an integral part of the degree requirements.

History

Four or five papers selected from the following, choosing at least one from each section:

A. 2 papers in British history†
B. 1 or 2 papers in European history†
C. 1 or 2 papers in world history.†

*Normally students who choose the second option under 7 will be expected to choose the first option under 2.

†The papers are to be selected from those listed under (1), (2) and (3) of the subjects available in the final examination for special studies history, p. 368.

## GEOGRAPHY AND POLITICS
## GEOGRAPHY AND SOCIOLOGY

*See* under Faculty of Economic and Social Studies, page 432.

**ITALIAN AND MUSIC:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in Italian and Music.

### *Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 315.

### *Scheme of Study*

Candidates will normally be required to spend a period of at least one month in Italy or in some other Italian-speaking country during the long vacation of their first or second year, this period to include attendance at an approved course of study.

### *Final Examination*

Italian
- Translation and composition (1 paper)
- Essay in Italian (1 paper)
- Italian civilisation (1 paper)
- Literature* (2 papers)
- Special subject in Italian (1 paper)
- Oral examination in Italian

Music
- History of music since 1880 (1 paper)
- Harmony and counterpoint (2 papers)
- Special subject (music) (1 paper)
- Acoustics† (1 paper)
- Practical and oral examinations in music.

In addition candidates will be required to submit, not later than 1 May, an essay of about 8,000 words on a subject which may relate to Italian or to music or to some topic combining both these subjects. The title should be submitted to the heads of the combined studies school for approval at the beginning of the third year of the course.

**LATIN AND SPANISH:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in Latin and Spanish.

*The periods of literature and drama to be examined will be (a) 960–1400 and (b) normally *either* 1400–1595 *or* 1700 to the present day.

†This course is given in alternate years and candidates will take the examination at the end of the year in which they attend the course.

### *Course Requirement*

A suitable standard in Latin and in Spanish at advanced level or equivalent examination is required, and a pass in one other subject is preferred.

### *Scheme of Study*

Candidates will be required to spend a period of at least one month in Spain during the long vacation of their first or second year, this period to include attendance at an approved course of study.

### *Final Examination*

1. Latin unprepared translation and prose composition
2. Latin literature: prescribed books I
3. Latin literature: prescribed books II
4. The Romans and Spain
5. Latin general paper
6. Translation into Spanish
7. Translation from Spanish and essay in Spanish
8. Golden Age literature (Spanish)
9. Twentieth-century Spanish and Spanish-American literature
10. History of the Spanish language.

In addition candidates will be required to present themselves for an oral examination in Spanish.

**MATHEMATICS AND PHILOSOPHY:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in Mathematics and Philosophy.

### *Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 315.

### *Final Examination*

1. Logic and metaphysics
2. History of *either* ancient and medieval *or* modern philosophy
3. Philosophy of science *or* history of mathematics
4. Logical theory
5. Mathematical logic
6. An approved special subject in mathematics *or* philosophy
7. Pure mathematics
8. Applied mathematics
9. A further approved mathematical paper.

In addition candidates must present themselves for an oral examination.

**MUSIC AND THEOLOGY:*** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in Music and Theology.

*Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 315.

*Final Examination*

History of music since 1880 (1 paper)
Harmony and counterpoint (2 papers)
Special subject (music) (1 paper)
Acoustics†
Practical and oral examinations in music
Old Testament (with English text) (1 paper)
New Testament (with a prescribed text in Greek) (1 paper)
Biblical and historical theology (1 paper)
*Either* Philosophy of religion (1 paper)
*or* Comparative study of religions
*or* Church history.

In addition candidates will be required to submit, not later than 1 May, an essay of about 8,000 words on a subject which may relate to theology or to music or to some topic combining these subjects. The title should be submitted to the heads of the combined studies school for approval at the beginning of the third year of the course.

**PHILOSOPHY AND ENGLISH LITERATURE:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in Philosophy and English Literature.

*Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 315.

*Scheme of Study*

The scheme of study for the first academic year shall normally be the same as that for the degree of Bachelor of Arts in general studies or for the degree of Bachelor of Arts in special studies in English, provided in each case that it includes philosophy and English. Candidates with other combinations of

*Music and *either* Biblical studies *or* Philosophy and history of religion must be included among the subjects studied in the first year.

†This course is given in alternate years and candidates will take the examination at the end of the year in which they attend the course.

subjects may be admitted to the course, subject to the approval of the Board of the Faculties of Arts, Economic and Social Studies and Law. A qualifying examination in the subjects of their course which must normally be passed by candidates before they proceed to further study will be held at the end of the first year.

During the second and third years candidates shall be required to attend approved courses in philosophy and English literature and to submit written work as directed.

### *Final Examination*

1. Philosophical essay
2. Logic and metaphysics
3. Ethics
4. The history of ideas, in its relation to English literature
5. Critical theory, with reference to selected texts
6. 7. 8. History of English literature (Chaucer to the twentieth century) (3 papers)
9. A special subject, to be chosen with the approval of the heads of the departments of philosophy and English literature.

In addition candidates shall be required to present themselves for an oral examination.

**PHILOSOPHY AND SUBSIDIARY FRENCH:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in Philosophy and subsidiary French.

### *Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 315.

### *Scheme of Study*

The scheme of study for the first academic year will normally be the same as that for the degree of Bachelor of Arts in general studies, provided that it includes philosophy and French. A qualifying examination in these subjects which must normally be passed by candidates before they proceed to further study will be held at the end of the first year. Subject to the approval of the Board of the Faculties of Arts, Economic and Social Studies and Law, suitably qualified candidates may be permitted to vary the course of study required for the first year.

During the second and third years candidates must attend approved courses in philosophy and those courses in French prescribed for general studies. They must submit written work as directed and pass such qualifying examinations as may be prescribed. Candidates will be required to spend a period of at least

one month in France or some other French-speaking country during the long vacation of their first or second year, this period to include attendance at an approved course of study.

### *Final Examination*

1. Essay
2. Logic and metaphysics
3. The history of *either* ancient and medieval *or* modern philosophy
4. Ethics *or* political and social philosophy
5. A philosophical special subject chosen with the approval of the heads of the departments of philosophy and French

6—9. Four papers in French.

In addition candidates will be required to present themselves for an oral examination in philosophy and French.

**PHILOSOPHY AND HISTORY:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in Philosophy and History.

### *Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 315.

### *Scheme of Study*

The scheme of study for the first academic year shall normally be the same as that for the degree of Bachelor of Arts in general studies or for the degree of Bachelor of Arts in special studies in history, provided in each case that it includes philosophy and history. A qualifying examination in these subjects which must normally be passed by candidates before they proceed to further study will be held at the end of the first year. Subject to the approval of the Board of the Faculties of Arts, Economic and Social Studies and Law, suitably qualified candidates may be permitted to vary the course of study required for the first year.

During the second and third years candidates must attend approved courses in philosophy and history and submit written work as directed.

### *Final Examination*

1. Philosophical essay
2. Logic and metaphysics
3. Ethics
4. The history of *either* ancient and medieval *or* modern philosophy
5. Political and social philosophy *or* History of scientific thought

6. Philosophy of history *or* a special subject approved by the heads of the departments of philosophy and history
7. 8. 9. Three papers chosen, with the approval of the head of the department, from among the options prescribed in items 1, 2 and 3 of the final special studies examination in history.

In addition candidates must present themselves for an oral examination.

## PHILOSOPHY AND POLITICS

*See* under Faculty of Economic and Social Studies, page 433.

**PHILOSOPHY AND THEOLOGY:*** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in Philosophy and Theology.

### *Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 315.

### *Final Examination*

1. Philosophical essay
2. Logic and metaphysics
3. History of *either* ancient and medieval *or* modern philosophy
4. Ethics
5. Philosophy of religion
6. New Testament (with a prescribed text in Greek)
7. Biblical and historical theology
8. *Either* Old Testament
   *or* Church history
   *or* Comparative study of religions
9. A special subject to be chosen with the approval of the heads of the departments of philosophy and theology.

## SOCIOLOGY AND PHILOSOPHY

*See* under Faculty of Economic and Social Studies, page 434.

**THEOLOGY AND HEBREW:†** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in Theology and Hebrew.

*Philosophy and *either* Biblical studies *or* Philosophy and history of religion must be included among the subjects studied in the first year.

†Hebrew and *either* Biblical studies *or* Philosophy and history of religion must be included among the subjects studied in the first year.

## *Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 315.

## *Final Examination*

1. Old Testament (with English text)
2. New Testament (with a prescribed text in Greek)
3. Biblical and historical theology
4. Comparative study of religions
5. *Either* Philosophy of religion
   *or* Church history
   *or* Selected medieval Hebrew texts bearing on Jewish philosophy and theology
6. Biblical Hebrew texts
7. Post-biblical Judaism
8. Palestinian archaeology.

In addition, candidates will be required to submit not later than 1 May an essay of 8,000 to 10,000 words on a subject which relates to theology or Hebrew or to some topic combining both these subjects. The title should be submitted to the heads of the combined studies school at the beginning of the third year.

# REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN SPECIAL STUDIES

Candidates should note that in order to qualify for admission to a scheme of study for a first degree in the University, they must satisfy both a *General Requirement* and a *Course Requirement*. For information regarding the *General Requirement*, for purposes of matriculation, candidates should write to The Secretary, Joint Matriculation Board, Manchester 15. The *Course Requirement* is set out at the beginning of the regulations for each degree scheme of study in the Faculty of Arts.

**GREEK:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in special studies in Greek.

## *Course Requirement*

For admission to the scheme passes in two approved subjects at advanced level are required.

*One* of these passes must be in Greek.

In addition candidates must have at least a pass in Latin at ordinary level and knowledge of a modern foreign language, preferably German, and of mathematics or (in special cases) an approved science subject.

## *Scheme of Study and Examination*

The scheme of study and examination will be:

1. The Greek books prescribed for special studies in classics (2 papers)
2. Translation from further Greek authors (1 paper)
3. General paper as for special studies in classics (1 paper)
4. Greek unprepared translation (1 paper)
5. Greek prose composition (1 paper)
6. A period of Greek history studied in connection with the original authorities (1 paper)
7. Development of the Greek language with an elementary knowledge of the dialects (1 paper)
8. *One* of the following special subjects (1 paper):
   (a) History of Greek language
   (b) Outlines of Greek philosophy
   (c) The special study of an author or of *one* of the following types of literature: (i) Homeric poems (ii) Greek lyric poetry (iii) Greek drama in the 5th century (iv) Greek oratory, with special reference to Demosthenes
   (d) Greek art and architecture
   (e) Greek sculpture or vase painting or epigraphy

Greek verse composition may be offered as an *optional* subject in the final examination.

Attendance in the subjects of the school shall be, during the first year not less than seven hours a week, during the second year not less than nine hours a week, and during the third year not less than seven hours a week.

Candidates other than those who have already completed the scheme for the degree in special studies in Latin may, in place of a certain number of the books prescribed in Greek, be permitted to substitute a certain number of the books prescribed for the scheme in special studies in Latin to be specified from year to year.

SPECIAL REQUIREMENTS

1. Candidates are required to attend the one-year and the two-year courses in Latin as prescribed in the regulations for the degree of Bachelor of Arts in general studies and to pass the prescribed examinations in that subject.

2. Candidates are required to attend the one-year course in ancient history and to pass the prescribed examination in that subject.

Some modification of the special requirements may be made, subject to the approval of the Board of the Faculties of Arts, Economic and Social Studies and Law, for candidates who have distinguished themselves at the advanced level in the examination for the General Certificate of Education.

GREEK AS A SUBSIDIARY SUBJECT

1. Candidates for the degree in special studies in the school of Latin are required to attend for three years such courses in Greek as may be approved for them by the Board of the Faculties of Arts, Economic and Social Studies and Law, and to pass the appropriate examinations. The subjects for examination will be:

(a) Translation from Greek into English
(b) Translation from English into Greek
(c) Prescribed Greek texts.

2. Candidates for the degree in special studies in schools other than Latin who offer Greek as a subsidiary subject will be required to attend such courses in Greek prescribed for the degree in general studies as may be appropriate, and to present themselves for examination at the end of the course.

3. Candidates for the degree in special studies in the school of biblical studies who offer Greek as a subject under the regulations of that school may, in appropriate cases, attend the course approved for candidates in the school of Latin (*see* 1 above) and take the corresponding examination.

**LATIN:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in special studies in Latin.

*Course Requirement*

For admission to the scheme passes in two approved subjects at advanced level are required.

*One* of these passes must be in Latin.

The *second* may be in any approved subject at advanced level.

In addition a knowledge of Greek is desirable but not essential. Candidates with no knowledge of Greek will be expected to take an introductory course in Greek in the first year.

## *Scheme of Study*

First year

1. Latin language and literature
2. Greek
3. Ancient history (the one-year course prescribed for the degree of Bachelor of Arts in general studies).

A qualifying examination in these subjects, which must normally be passed as a whole by candidates before they proceed to further study, will be held at the end of the first year.

Second and third years

1. The Latin books prescribed for special studies in classics (2 papers)
2. Further Latin books (1 paper)
3. General paper as for special studies in classics (1 paper)
4. Latin unprepared translation (1 paper)
5. Latin prose composition (1 paper)
6. A period of Roman history studied in connection with the original authorities (1 paper)
7. Development of the Latin language (1 paper)
8. *One* of the following special subjects:
   (a) Stoicism and Epicureanism in Roman life and thought
   (b) An approved subject in Latin literature
   (c) Greek art and architecture
   (d) History and archaeology of Roman Britain

Candidates other than those who have already completed the scheme for the degree in special studies in Greek may, in place of a certain number of the books prescribed in Latin, be permitted to substitute a certain number of the books prescribed for the scheme in special studies in Greek to be specified from year to year.

Latin verse composition may be offered as an optional extra paper, merit in which will be taken into account in the final assessment.

SPECIAL REQUIREMENT

1. Candidates must attend for three years such courses in Greek as may be approved for them by the Board of the Faculties of Arts, Economic and Social Studies and Law, and pass the appropriate examination.

Some modification of the special requirement may be made, subject to the approval of the Board of the Faculties of Arts, Economic and Social Studies and Law.

LATIN AS A SUBSIDIARY SUBJECT

Students of other special studies schools taking Latin as a subsidiary subject for three years will be required to take the following courses:

In the first year: the one-year course prescribed for general studies

In the second and third years: Prose composition
Unprepared translation
Prescribed books.

The prescribed books will be selected from the books prescribed for the two-year course in Latin general studies. These books will be examined at the time of the final examination. The examination in the subsidiary subject is an integral part of the final examination.

**CLASSICS:** There are two schemes of study leading to the degree of Bachelor of Arts in special studies in Classics, one extending over three years (alternative 1) and the other extending over four years (alternative 2). Candidates wishing to take the four-year scheme (alternative 2) must enter the first year of the special studies scheme in Latin. After successful completion of the first year of study candidates may be permitted to transfer to a three-year scheme in classics.

*Course Requirement*

For admission to the three-year scheme of study (alternative 1) passes in two approved subjects at advanced level are required.

*One* of these passes must be in Latin.

The *second* must be in Greek.

The course requirements for the four-year scheme of study (alternative 2) are the same as those for the special studies degree in Latin.

*Scheme of Study*

Translation from prescribed Greek and Latin books
Translation at sight from Greek and Latin authors
Greek and Latin composition
Greek and Latin literature
*Two* of the following:
Ancient history
Ancient philosophy
A special subject chosen from the special subjects prescribed for Greek or Latin special studies.

Candidates may offer either (alternative 1) Greek and Latin at special standard throughout the scheme of study, passing both at the same examination, normally at the end of the third year, or (alternative 2) Latin at special standard in the first three years, and Greek at general standard in the first year and at special standard in the second, third and fourth years, the examination in each case to be taken at the end of the third year of special study. Under the second alternative the class list will be published only after the final examination in

the fourth year, and will be based on the results of both examinations; after the examination at the end of the third year the names of those who have satisfied the examiners will be published in alphabetical order.

The attendance on courses required for the first year for the degree of Bachelor of Arts in general studies may also be accepted by the Senate in place of the attendance for the first year as set out under alternatives 1 and 2 below, provided that the subjects chosen by the candidate are substantially and to the satisfaction of the Board of the Faculties of Arts, Economic and Social Studies and Law, those required for the course for the first year in the school of special studies in classics.

*ALTERNATIVE 1*

Attendance in the subjects of the school shall be not less than ten hours a week in the first and second years, and eight hours a week in the third year.

*Examination*

Greek prose composition (1 paper)
Latin prose composition (1 paper)
Greek unprepared translation (1 paper)
Latin unprepared translation (1 paper)
Translation from prescribed Greek books, with questions arising out of them (2 papers)
Translation from prescribed Latin books, with questions arising out of them (2 papers)
General paper (Greek), including questions on Greek literary criticism, antiquities, language and metre
General paper (Latin), including questions on Latin literary criticism, language and metre and on Roman antiquities
*Two* of the following:
  Ancient history (1 paper)
  Ancient philosophy (1 paper)
  A special subject chosen from the special subjects prescribed for Greek or Latin special studies.
Greek or Latin verse composition may be offered as an *optional* subject in the final examination.

*ALTERNATIVE 2*

The subject of study and examination shall be:
  in Latin—as for the school of special studies in Latin, except that (a) candidates must offer a certain number of Greek books under number 2 (Further Latin books); (b) candidates will be excused the subject numbered 7 (Development of the Latin language).
  in Greek—as for the school of special studies in Greek, except that (a) candidates must offer a certain number of Latin books under number 2 (Translation from further Greek authors); (b) candidates will be excused the subject numbered 7 (Development of the Greek language); (c) a candidate who has offered Greek art and architecture in the Latin examination under number 8 may not offer the same subject for examination in Greek.

SPECIAL REQUIREMENTS

(a) Candidates are required to attend the one-year course in Greek as prescribed in the regulations for the degree of Bachelor of Arts in general studies and to pass the prescribed examination in that subject.

(b) Candidates are required to attend the one-year course in ancient history and to pass the prescribed examination in that subject.

Some modification of the special requirements may be made, subject to the approval of the Board of the Faculties of Arts, Economic and Social Studies and Law, for candidates who have distinguished themselves at the advanced level in the examination for the General Certificate of Education.

**LATIN WITH GREEK:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in special studies in Latin with Greek. Candidates wishing to read for the degree of Latin with Greek must enter the first year of the special studies scheme in Latin. After successful completion of the first year of study candidates may be permitted to transfer for their second and third years to the special studies scheme in Latin with Greek.

*Course Requirement*

The course requirements are the same as those for special studies in Latin.

*Scheme of Study*

1. The Latin books prescribed for special studies in classics (2 papers)
2. Further Latin books, as prescribed for special studies in Latin (1 paper)
3. Greek books selected from those prescribed for special studies in classics (1 paper)
4. General questions on Greek and Latin language and literature (1 paper)
5. Latin unprepared translation (1 paper)
6. Greek unprepared translation (1 paper)
7. Latin prose composition (1 paper)
8. Greek prose composition (1 paper)
9. A period of Greek or Roman history studied in connection with the original authorities (1 paper)
10. A special subject chosen from those prescribed for the schools of special studies in Greek and in Latin (1 paper)

Attendance in the subjects of the school shall be during the first year not less than seven hours a week, during the second year ten hours a week, and during the third year not less than eight hours a week.

SPECIAL REQUIREMENTS

1. Candidates are required to attend the one-year course in Greek as prescribed in the regulations for the degree of Bachelor of Arts in general studies, and to pass the prescribed examination in that subject.

2. Candidates are required to attend the one-year course in ancient history and to pass the prescribed examination in that subject.

Some modification of the special requirements may be made, subject to the approval of the Board of the Faculties of Arts, Economic and Social Studies and Law, for candidates who have distinguished themselves at the advanced level in the examinations for the General Certificate of Education.

**SEMITIC LANGUAGES AND LITERATURES:** There are two schemes of study, Scheme A and Scheme B, both extending over a period of three years and leading to the degree of Bachelor of Arts in special studies in Semitic Languages and Literatures.

## *Course Requirement*

For admission to either scheme passes in two approved subjects at advanced level are required. These passes may be in any approved subject. Candidates without sufficient proficiency in Hebrew wishing to follow Scheme A or candidates without sufficient knowledge in Hebrew or Arabic wishing to follow Scheme B, will be required to attend courses on and pass examinations in these subjects before admission to the three-year scheme.

*SCHEMES A and B*

Hebrew and *either* Aramaic-Syriac *or* Arabic are studied concurrently throughout the course, Aramaic-Syriac or Arabic being the main supporting language.

The scheme of study for the first academic year shall include the following four subjects:

1. Hebrew language and literature
2. *Either* Eastern and Western Aramaic *or* Arabic language and literature
3. 4. Two other approved subjects, which would normally be subjects taken outside the department of Semitic languages and literatures.

A qualifying examination in all these subjects must normally be passed at the end of the first year of study by candidates before they proceed to further study.

In addition, candidates may be required in any year to attend a course given in any department which may be helpful to their studies in the subjects of the school.

During the second and third years candidates will pursue the following courses of study:

1. Hebrew language and literature, including biblical history and archaeology; critical introduction to the literature of the Old Testament; the growth of religious ideas and institutions in the Bible; the inter-testamental period and New Testament background, studied in connection with post-biblical and rabbinic texts; mishnaic and medieval Hebrew; modern Hebrew language and literature

2. Further study of *either* Aramaic (including Syriac) *or* Arabic
3. A special subject (studied in the third year only) normally selected, with the approval of the head of the department from the following list:
   (a) Advanced Syriac*
   (b) Advanced medieval Hebrew
   (c) Advanced Arabic*
   (d) Old Testament Greek and papyri†
   (e) Palestinian archaeology
   (f) Advanced comparative Semitic philology and epigraphy.

In addition to the above subjects, candidates will be required, during the second and third years of the scheme of study, to pursue a prescribed course and to pass the necessary examinations in the following:

*SCHEME A*

One of the two outside subjects studied in the first year.

*SCHEME B*

*Either* Aramaic-Syriac (3 papers) in the case of candidates who have chosen Arabic under 2 above

*or* Arabic (3 papers) in the case of candidates who have chosen Aramaic (including Syriac) under 2 above.

Candidates will normally be required to spend part of the summer vacation after the first year at a recognised centre of Hebrew (and, in the case of candidates who take Arabic as their second main language, Arabic) studies in the Near East, as approved by the head of the department. (Arrangements can be made for candidates, who so wish, to spend a whole session at the Hebrew University, Jerusalem, or at another approved centre.) The cost of residence abroad is not included in the normal fee for an arts course.

## *Final Examination*

The following papers shall be obligatory for students following both scheme A and scheme B:

Specified and unspecified texts of biblical Hebrew, with reference to critical introduction, etc., (1 paper)

Specified and unspecified texts of post-biblical (including mishnaic and mediaeval) Hebrew (1 paper)

Specified and unspecified modern Hebrew texts (1 paper)

General Hebrew literature questions, prose texts, and composition (1 paper)

Comparative grammar of the Semitic languages, and questions on the special subject studied in the third year, as in 3(a) to (f) above (1 paper)

*Either* specified or unspecified texts of Aramaic, including Syriac (3 papers)

*or* specified and unspecified texts of Arabic (3 papers).

*This subject is not available to candidates who have taken this language for one year only as an approved language in their first year.

†Candidates choosing this option must normally have taken Greek in their first year as one of the approved subjects.

**ENGLISH:** There are four alternative schemes of study all extending over a period of three years and leading to the degree of Bachelor of Arts in special studies in English.

## *Course Requirement*

For admission to any of the four schemes passes in at least two approved subjects at advanced level are required.

*One* of these passes must be in English literature.

The *second* must be in a language other than English.

A pass in a further subject at advanced level would be an advantage.

## *Schemes of Study*

There will be alternative schemes of study:

A. English language and literature

B. English language and literature

C. English literature

D. Modern English.

Under these schemes the first academic year shall include English literature; English language and medieval literature; and *two* of the subjects approved as a first-year or a one-year subject by the Board of the Faculties of Arts, Economic and Social Studies and Law, of which one will normally be a language other than English; four subjects in all.

Qualifying examinations will be held in these subjects at the end of the first year. These must normally be passed by candidates before they proceed to further study in any one of the above specified schemes.

First year

See English S1A and S1B, pages 403 and 404.

Second and third years

*SCHEME A:* ENGLISH LANGUAGE AND LITERATURE

In this scheme the emphasis will be on literature. Candidates must attend the following courses:

Second year

| | Hours |
|---|---|
| 1. In the department of English literature: | |
| The novel | 1 |
| Period | 1 |
| Prose | 1 |
| Criticism | 1 |
| Poetry | 1 |
| Tutorial class | 1 |
| 2. In the department of English language and medieval literature: | |
| Chaucer (in alternate years) | 1 |
| *Either* (a1) Old English literature | 1 |
| Middle English literature | 1 |
| *or* (a2) Middle English literature | 2 |
| History of English | 1 |
| Tutorial class | 1 |

Third year — Hours

1. In the department of English literature:
   - Shakespeare — 1
   - The novel — 1
   - Criticism — 1
   - Poetry — 1
   - Selected author (seminar class) or American literature — 1
   - Tutorial class — 1

2. In the department of English language and medieval literature:
   - Chaucer (in alternate years) — 1
   - *Either* (a1) Old English literature — 1
     Middle English literature — 2
   - *or* (a2) Middle English literature — 1
     History of English — 1
   - Tutorial class — 1

*SCHEME B:* ENGLISH LANGUAGE AND LITERATURE

In this scheme, the emphasis will be on philology and medieval literature.

During the second and third years, candidates will be required to attend the following courses:

1. In the department of English language and medieval literature:
   (a) Old English
   (b) Middle English
   (c) Chaucer and the fifteenth century
   (d) English philology
   (e) Any *two* of the following:
   Gothic and Germanic philology, Old Icelandic, Modern Icelandic, English palaeography and bibliography, Anglo-Saxon art and archaeology, medieval Welsh, the structure of present-day English, general linguistics and comparative philology, linguistics, English folk life, English dialectology [both normally examined by thesis]; phonetics [taken in the department of phonetics].

In place of one of the options mentioned in (e) above, candidates may elect to take, by arrangement with the head of the department concerned, Old Saxon and Old High German, Old French, or to take an additional language or philological course approved by the Board of the Faculties of Arts, Economic and Social Studies and Law, or to take an additional subject in the department of English literature, or to present a dissertation on an approved subject. Further, in place of one of the options mentioned in (e) above, candidates may be permitted, by arrangement with the head of the department of English literature, to take a second additional subject in that department.

Candidates who wish to take any one of the above-mentioned courses that are given outside the department of English language and medieval literature, or to present a dissertation, should inform the professor of English language and medieval literature not later than the beginning of their second academic year.

2. In the department of English literature: — Hours
   - (a) Poetry — 1
   - (b) Shakespeare — 1

*SCHEME C:* ENGLISH LITERATURE

Candidates will be required to attend the following courses:

Second year

| | Hours |
|---|---|
| 1. In the department of English literature: | |
| Milton | 1 |
| The novel | 1 |
| Period | 1 |
| Prose | 1 |
| Criticism | 1 |
| Poetry | 1 |
| General lecture | 1 |
| Practical drama | 1 |
| Tutorial class | 1 |
| 2. In the department of English language and medieval literature: | |
| Middle English literature or, in alternate years, Chaucer | 1 |

Third year

| | |
|---|---|
| 1. In the department of English literature: | |
| Shakespeare | 1 |
| The novel | 1 |
| Drama | 1 |
| Poetry | 1 |
| Criticism | 1 |
| American literature *or* selected author (seminar class) | 1 |
| Tutorial class | 1 |
| 2. In the department of English language and medieval literature: | |
| Chaucer or, in alternate years, Middle English literature | 1 |

*SCHEME D:* MODERN ENGLISH

Candidates will be required to attend the following courses:

Second year

| | |
|---|---|
| Linguistics and phonetics | 2 |
| Contemporary English language | 1 |
| Style and rhetoric | 1 |
| Medieval English literature *or* Special period in sixteenth-eighteenth-century English literature *or* Folk life studies *or* a Special subject in contemporary language | 1 |
| Novel 1 | 2 |
| Poetry 1 | 1 |
| Prose | 1 |
| Tutorial class | 1 |

Third year

| | |
|---|---|
| Linguistics and phonetics | 2 |
| Contemporary English language | 1 |

| | Hours |
|---|---|
| Shakespeare | 1 |
| Medieval English literature *or* the study of a Special author (*or* of American literature) *or* Folk life studies *or* a Special subject in contemporary language | 1 |
| Novel 2 | 1 |
| Poetry 2 | 1 |
| Tutorial class | 1 |

*Examinations*

Schemes A and C

At the end of their second academic year candidates will sit for the examination for the degree in special studies in English, part 1, and will take one paper on each of the following:

1. The period studied
2. Prose

Candidates for Scheme C must also satisfy the examiners that they have attended and worked satisfactorily in

3. Practical drama

At the end of their third academic year candidates will sit for the examination for the degree in special studies in English, part 2, and will take one paper on each of the following:

Scheme A

1. Shakespeare
2. The novel
3. Criticism
4. Poetry
5. American literature *or* selected author
6. Old English *or* history of English
7. Middle English texts
8. Chaucer and the fifteenth century

Scheme C

1. Shakespeare
2. The novel
3. The drama
4. Criticism
5. Poetry
6. American literature *or* selected author
7. Chaucer and Middle English literature
8. A dissertation on some aspect of Milton or another author must also be written.

Candidates will also be examined orally.

Candidates taking schemes A or C may also submit an original piece of work, either creative or academic, to be taken into consideration when their class is assessed.

The special author in the session 1964-65 will be Cowper.

The selected texts for the Old English paper in part 2 in June 1965 will be *Beowulf and The Fight at Finnsburg* (3rd ed., Klaeber, Heath and Co.); Wyatt's *Anglo-Saxon Reader* (specified sections).

The selected texts for the Middle English paper (Scheme A) in part 2 in June 1965 will be *Sir Gawain and the Green Knight* (ed. Tolkien and Gordon);

*Fourteenth Century Verse and Prose* (ed. Sisam, with vocabulary by Tolkien); *Early Middle English Texts* (ed. Dickens and Wilson) and other texts to be specified later.

Candidates will be required to translate passages from these texts and from unprescribed texts, and to answer literary and historical questions suggested by them.

Chaucer [for part 2 in June 1965]: general knowledge of the complete works and of their language and metre with detailed study of *The Parliament of Fowls*, *The Knight's Tale* and *The Miller's Tale*.

Scheme B

At the end of the third academic year candidates will sit for the final examination for the degree in special studies in English and will take the undermentioned papers:

1. General paper, comprising passages for translation from unprescribed Old and Middle English texts and literary, historical and linguistic questions (1 paper)
2. Old English (1 paper)
3. Middle English (1 paper)
4. Chaucer and the fifteenth century (1 paper)
5. English philology (1 paper)
6. One paper on *one* of the following:
   - Gothic and Germanic philology
   - Old Icelandic
   - Modern Icelandic
   - Old Saxon and Old High German
   - Old French
   - English palaeography and bibliography
   - Phonetics
   - Anglo-Saxon art and archaeology
   - Medieval Welsh
   - The structure of present-day English
   - General linguistics and comparative philology
   - Linguistics
   - A subject in the department of English literature
7. One paper on another of the subjects mentioned in 6 above, or on the subject specially approved by the Board of the Faculties of Arts, Economic and Social Studies and Law, or on an additional subject taken in the department of English literature, unless the candidate has previously received permission to present a dissertation instead.
8. Shakespeare (1 paper)
9. Poetry (1 paper)

Candidates will also be examined orally.

The selected texts for the papers in Old English, Middle English, and Chaucer and the fifteenth century in June 1965 will be as for Scheme A.

Scheme D

At the end of their second academic year candidates will sit for the examination for the degree in special studies in English, part 1, and will take a paper on each of the following:

1. Style and rhetoric
2. Prose

At the end of their third academic year candidates will sit for the examination for the degree in special studies in English, part 2, and will take one paper on each of the following:

1. Linguistics and phonetics
2. Contemporary English language
3. Shakespeare
4. Medieval English literature *or* Special period and Special author (*or* American literature) *or* Folk life studies *or* a special subject in contemporary language. The last two options will normally be examined by thesis.
5. The novel.
6. Poetry.

A dissertation must also be written on an author selected from those studied in second-year courses.

Candidates will also be examined orally.

**FRENCH:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in special studies in French Language and Literature.

## *Course Requirement*

For admission to the scheme passes in three approved subjects at advanced level are required.

*One* of these passes must be in French.

The *second* and *third* may be in any approved subject at advanced level.

In addition a pass in Latin at ordinary level is required.

## *Scheme of Study*

First year

1. French language and literature (translation into French, translation into English and *explication*, phonetics and Old French, general linguistics and Romance philology, history of the French language, period or periods of French literature and thought)
2. French history and institutions

3 and 4. Two other approved subjects

A qualifying examination must normally be passed by candidates before they proceed to further study. In French, this will consist of an oral examination and the following papers:

1. Translations from and into French
2. *Explication de textes*
3. General linguistics, Romance philology, history of the French language, and Old French
4. French history and institutions
5. Literature, including a literary essay in French
6. Phonetics (1½ hours)

Second year

1. Translation into French
2. Translation into English
3. *Explication de textes*
4. History of the French language (phonology and morphology)
5. Old French
6. Stylistics
7. French history and institutions
8. Phonetics
9, 10, 11. Special subjects, to be chosen with the approval of the head of the department: three of the following,* two of which will be selected from Group I, and one from Group II:

Group I:

(a) Seventeenth-century literature
(b) Eighteenth-century novel
(c) Eighteenth-century drama
(d) Semantics

Group II:

(a) Sixteenth-century poetry
(b) Eighteenth-century thought
(c) Twentieth-century drama

Final year

1. Translation into French
2. Translation into English
3. *Explication de textes*
4. History of the French language (syntax)
5. Old French
6. French history and institutions

*Not all the subjects in this list will necessarily be available in any one year, and new subjects may be added from time to time.

7, 8, 9. Special subjects: three of the following,* selected with the approval of the head of the department:

(a) Sixteenth-century prose
(b) Seventeenth-century literature
(c) Nineteenth-century novel
(d) Nineteenth-century poetry
(e) Twentieth-century literature
(f) Twentieth-century novel
(g) Twentieth-century thought
(h) Provençal
(i) Romance philology (this course will be open only to those who offer Latin, Spanish or Italian as a subsidiary subject)
(j) Contemporary history and institutions
(k) Phonetics

A dissertation, to take two years, may be substituted for two courses, one from 9 to 11 in the second year, and one from 7 to 9 in the final year.

In addition to the above, students will be required to take in their second and final years a subsidiary subject, to be approved by the head of the department of French language and literature, from sections 3 and 4 of the first-year course, and to present themselves for the necessary examinations. An examination in this subsidiary subject will be held in March of the second year of study. The results obtained will be taken into account in considering the results of the final examination in the subsidiary subject, which is an integral part of the final degree examination.

The third term of the second year will normally be spent at a university abroad, the choice of the university to be subject to the approval of the head of the department in consultation with the head of the department in which the subsidiary subject is taken. The following year will normally be spent in France. The cost of residence abroad is not included in the normal fee for an arts course.

*Final Examination*

The final examination will consist of an oral examination and the following papers, which, unless otherwise indicated, will be of three hours each.

1. Translation into French
2. Translation into English (including Old French unseen translation)
3. Essay
4. *Explication de textes*
5. History of the French language, and stylistics. The examination in phonology and morphology (1½ hours) will normally be held in March of the second year,† the examination in syntax and stylistics (1½ hours) at the end of the final year.
6. Old French

*Not all the subjects in this list will necessarily be available in any one year, and new subjects may be added from time to time.

7. French history and institutions (1½ hours)
8. Second-year special subjects: the subjects chosen from Group I will be examined in March of the second year,* the subject chosen from Group II will be examined at the end of the final year (1½ hours)
9, 10, 11. Final-year special subject (3 papers, each of 2 hours).

FRENCH AS A SUBSIDIARY SUBJECT

Students of *other* special studies schools taking French as a subsidiary subject will be required to take the following courses in the second year:

Prose and essay
Translation
Literature
Phonetics and conversation
} three hours a week and conversation

In the third year

Prose and essay
Translation
Literature
Conversation
} three hours a week and conversation

An examination in this subsidiary subject will be held in March of the second year of study. The results obtained will be taken into account in considering the results of the final examination in the subsidiary subject, which is an integral part of the final degree examination.

**FRENCH AND LATIN:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in special studies in French and Latin Languages and Literatures.

*Course Requirement*

For admission to the scheme passes in two approved subjects at advanced level are required and a third is preferred.

*One* of these passes must be in French.

The *second* must be in Latin.

*French*

The courses and examinations in French will be the same as those for the degree in special studies in modern languages and literatures [See pages 362 and 364].

*Latin*

The final examination will consist of the following papers:

Latin prose composition (1 paper)
Latin unprepared translation (1 paper)
The Latin books prescribed for special studies in classics (2 papers) [see the prospectus, *The Faculty of Arts*, pages 133-4.]
General paper as for special studies in classics (1 paper)
*One* of the special subjects as prescribed for special studies in Latin

*The results of this examination will be taken into account in assessing the results of the final examination.

**SPANISH:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in special studies in Spanish Language and Literature.

## *Course Requirement*

For admission to the scheme passes in three approved subjects at advanced level are required, although exceptionally candidates with two passes will be considered.

*One* of these passes must be in Spanish.

The *second* and *third* may be in any approved subject at advanced level. In addition a pass in Latin at ordinary level is required.

## *Scheme of Study*

First year

1. Spanish language and literature
2. A period of Spanish civilisation
3 and 4. Two other approved subjects.

A qualifying examination in these subjects which must normally be passed by candidates before they proceed to further study will be held at the end of the first year.

Subject to the approval of the Board of the Faculties of Arts, Economic and Social Studies and Law, some modification of the requirements of the first year may be made for candidates who have distinguished themselves at the advanced level in the examination for the General Certificate of Education, but all candidates will be required to attend the lectures on Spanish language, literature and civilisation, as well as those on the geography of Spain.

During the second and third years candidates shall be required to attend courses in the subjects of the school for not less than eight hours a week.

The third term of the second year will normally be spent at a university abroad, the choice of university to be subject to the approval of the head of the department, in consultation with the head of the department in which the subsidiary subject is taken. The cost of residence abroad is not included in the normal fee for an arts course.

Candidates may be required in any year to attend courses of lectures given in other departments which may be helpful to their studies in the subjects of the school.

In addition to the subjects of the school each candidate will be required to pursue a prescribed course and present himself for the necessary examination in one other subject included in the Faculty of Arts and approved by the head of the department of Spanish and Portuguese for a period extending over three years. An examination in this subsidiary subject will be held in March of the second year of study. The results obtained will be taken into account in considering the results of the final examination in the subsidiary subject, which is an integral part of the final degree examination.

*Examinations*

The qualifying examination at the end of the first year will consist of an oral examination and of the following papers in Spanish:
Translation (1 paper)
History of the language (1 paper)
Modern literature and civilisation (1 paper)
Literary appreciation (1 paper)
Essay (1 paper)

The degree examination will consist of nine papers (all of 3 hours) and an oral examination, to be taken as follows:

In March of the second year:
1. Golden Age literature
2. Hispanic American literature

At the end of the final year:
3. Translation into Spanish
4. Translation from Spanish
5. Essay
6. Medieval literature
7. 8. Papers on two special subjects, normally one on a Renaissance and one on a modern theme
9. One paper selected from:
   History of the Spanish language
   Spanish civilisation
   Twentieth-century Spanish literature
   Translation from and into Portuguese
   or a dissertation on a subject approved by the head of the department; and an oral examination.

SPANISH AS A SUBSIDIARY SUBJECT

An examination in Spanish as a subsidiary subject for the degree of Bachelor of Arts in special studies will be held in March of the second year of study. The results obtained will be taken into account in considering the results of the final examination in the subsidiary subject, which is an integral part of the final degree examination.

**ITALIAN:** There are two schemes of study leading to the degree of Bachelor of Arts in special studies in Italian Language and Literature, one extending over three years and the other extending over four years.

*Course Requirement*

For admission to either scheme of study, passes in two approved subjects at advanced level are required.

In the case of the three-year scheme *one* of these passes should normally be in Italian. The *second* pass required for the three-year scheme, and *both*

the passes required for the four-year scheme may be in either Arts or Science subjects provided that a high degree of linguistic ability has been shown at ordinary level.

In addition a pass in Latin at ordinary level is required for both schemes.

### *Three-year scheme*

First year

1. Italian language, literature and drama
2. Latin, French, Spanish or English
3. A second subject from (2) or another approved subject
4. A period or periods of Italian civilisation.

A qualifying examination in these subjects which must normally be passed by candidates before they proceed to further study will be held at the end of the first year. The student shall normally pass the whole of the qualifying examination in June (or at the supplementary examinations in September). He may, however, be granted permission by the head of the department to proceed to the second year of the scheme of special studies in Italian after a failure to complete the qualifying examination provided that:

(a) he has failed in only one subject (not Italian) and
(b) in the opinion of the head of the department concerned he is likely to pass in the subject before the beginning of the third year of study.

Subject to the approval of the Board of the Faculties of Arts, Economic and Social Studies and Law, some modification of the requirements of the first year may be made for candidates who have distinguished themselves at the advanced level in the examination for the General Certificate of Education, but all candidates will be required to attend the lectures on Italian civilisation.

During the second year candidates shall be required to attend courses in the subjects of the school for not less than eight hours a week, such courses to include lectures on Italian civilisation.

The third term of the second year will normally be spent at some university where the medium of intercourse is Italian. The cost of residence abroad is not included in the normal fee for an arts course.

During the third year candidates shall be required to attend courses in the subjects of the school for not less than eight hours a week.

Candidates may be required in any year to attend courses of lectures given in other departments which may be helpful to their studies in the subjects of the school.

In addition to the subjects of the school each candidate will be required to pursue a prescribed course and present himself for the necessary examination in one other subject included in the Faculty of Arts and approved by the head of the department of Italian for a period extending over three years.

*Four-year scheme*

First year

1. Italian language, literature and drama
2. Latin, French, Spanish, German, Russian or English
3. Philosophy, fine art, sociology, or another approved subject
4. A period of Italian civilisation.

At the end of the first year of the course candidates must present themselves for the following examinations:

The preliminary examinations in Italian language, literature, drama and civilisation (5 papers)

The qualifying examination in at least one of the subjects in 2 and 3.

Normally a candidate will not be allowed to proceed to further study until he has passed the preliminary examination in Italian language, literature, and civilisation and in one of the subjects of the qualifying examination.

Second year

1. Italian language, literature and drama
2. A period of Italian civilisation
3. Further work in a subject approved under 2 or 3 of the first-year course.

A qualifying examination in the subjects under 1 and 2, which must normally be passed by candidates before they proceed to further study, will be held at the end of the second year. Candidates will also normally be required to pass the prescribed examination in the subject taken in 3.

During the third year candidates shall be required to attend courses in the subjects of the school for not less than eight hours a week, such courses to include lectures on Italian civilisation.

The third term of the third year will normally be spent at some university where the medium of intercourse is Italian. The cost of residence abroad is not included in the normal fee for an arts course.

During the fourth year candidates shall be required to attend courses in the subjects of the school for not less than eight hours a week.

Candidates may be required in any year to attend courses of lectures given in other departments which may be helpful to their studies in the subjects of the school.

In addition to the subjects of the school each candidate will be required to pursue a prescribed course and present himself for the necessary examination in one other subject included in the Faculty of Arts and approved by the head of the department of Italian for a period extending over three years.

*Examinations*

*THREE-YEAR SCHEME*

The qualifying examination at the end of the first year shall consist of an oral examination and the following papers:

Composition and unseen translation (1 paper)
Literature and drama (2 papers)
Italian civilisation (1 paper)
Essay in Italian (1 paper)

The final examination at the end of the third year shall consist of an oral examination and the following papers:

Composition and unseen translation (1 paper)
Literature, drama and prescribed texts (3 papers)
Italian civilisation (1 paper)
Special subject (1 paper)
Essay in Italian on a prescribed subject (1 paper)
History of the language (1 paper)

In addition, candidates shall be required to present a dissertation on a subject approved by the head of the department.

*FOUR-YEAR SCHEME*

(a) The preliminary examination at the end of the first year shall consist of an oral examination and the following papers in Italian:
Translation into Italian (1 paper)
Translation into English and essay in Italian (1 paper)
Literature and drama (2 papers)
Italian civilisation (1 paper)

(b) A qualifying examination at the end of the second year shall consist of an oral examination and the following papers in Italian:
Composition and unseen translation (1 paper)
Literature and drama (2 papers)
Italian civilisation (1 paper)
Essay in Italian (1 paper)

(c) The final examination at the end of the fourth year shall take the form prescribed for final-year candidates taking the three-year scheme.

**GERMAN:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in special studies in German Language and Literature.

## *Course Requirement*

For admission to the scheme passes in three approved subjects at advanced level are required although candidates with only two passes will be considered.

*One* of these passes must be in German.
The *second* and *third* may be in any approved Arts subjects.

## *Scheme of Study*

First year

1. German language and literature
2. Another approved foreign language or English
3. Another approved subject in the Faculty not taken under 2
4. Modern history with special reference to Germany, or an approved course in philosophy.

A qualifying examination in these subjects which must normally be passed by candidates before they proceed to further study will be held at the end of the first year. The qualifying examination in German shall consist of an oral examination, a practical test in phonetics and the following four papers:

1. Composition and essay
2. Unprepared translation
3. Prescribed modern texts
4. Middle High German and phonetics.

No candidate shall be regarded as having satisfied the examiners unless he reaches an adequate standard in German composition and essay.

Subject to the approval of the Board of the Faculties of Arts, Economic and Social Studies and Law, some modification of the requirements of the first year may be made for candidates who have distinguished themselves at the advanced level in the examination for the General Certificate of Education, but all candidates must attend the lectures on modern history with special reference to Germany, or those in the approved course in philosophy.

In the second and third years there shall be alternative schemes of study: scheme A, in which special attention will be paid to literature; and scheme B, in which special attention will be paid to philology and medieval literature.

All candidates shall continue the study of composition and attend a course on German life and thought.

The third term of the second year will normally be spent at an approved university where the medium of intercourse is German. The cost of residence abroad is not included in the normal fee for an arts course.

Candidates may be required in any year to attend courses of lectures given in other departments which may be helpful to their studies in the subjects of the school.

In addition to the subjects of the school, each candidate must pursue a prescribed course and present himself for the necessary examination in one other subject included in the Faculty of Arts and approved by the head of the department of German for a period extending over three years. An examination in this subsidiary subject will be held in March of the second year of study. The results obtained will be taken into account in considering the results of the final examination in the subsidiary subject, which is an integral part of the final degree examination.

### *Examination*

The final examination in German shall consist of an oral examination and of the following papers:

*SCHEME A*

Literature and modern texts (4 papers)
Middle High German (1 paper)
An essay or essays in German on subjects relating to German literature and history or thought (1 paper)

Composition (1 paper)
Unprepared translation (1 paper)
An approved special subject (1 paper)

In place of the special subject candidates may present an extended essay on a subject approved by the head of the department.

*SCHEME B*

Old High German (1 paper)
History of the German language (1 paper)
Middle High German (1 paper)
Additional Middle High German and Early New High German (1 paper)
One approved subject chosen from the following:
Gothic, Old Saxon, Old Icelandic, Modern Icelandic, Old English, Early New High German, or some other Germanic language or dialect, provided the subject chosen has not been studied as a first-year or other prescribed subject or part of such a subject (1 paper)
German texts since 1700 (1 paper)
An essay or essays in German on subjects relating to German literature and history or thought (1 paper)
Composition (1 paper)
Unprepared translation (1 paper)

No candidate shall be regarded as having satisfied the examiners unless he reaches an adequate standard in German prose composition and essay.

GERMAN AS A SUBSIDIARY SUBJECT

Students of *other* special studies schools taking German as a three-year subsidiary subject will be required to take the following courses in the second year:

Composition
Literature
Prescribed texts
Phonetics

and in the third year:

Composition
Literature
Prescribed texts
Conversation

Prescribed texts and literature studied in the second year will be examined in March of that year along with phonetics; and those studied in the third year will be examined in June of the third year.

The examination in each of the second and third years will consist of two papers:

1. Composition, unprepared translation and essay.
2. Literature and prescribed texts together with an examination in phonetics in the second year and an oral examination in the third year.

An examination in this subsidiary subject will be held in March of the second year of study. The results obtained will be taken into account in considering the results of the final examination in the subsidiary subjects, which is an integral part of the final degree examination.

**RUSSIAN:** There are two schemes of study leading to the degree of Bachelor of Arts in special studies in Russian, one extending over three years and the other extending over four years.

*Course Requirement*

For admission to either scheme of study passes in three approved subjects at advanced level are required.

In the case of the three-year scheme:
*One* of these passes must be in Russian
The *second* and *third* may be in any approved subject at advanced level.
In the case of the four-year scheme no qualification in Russian is required and the *three* passes may be in any approved subject at advanced level.

*Scheme of Study*

First year

1. Russian language
2. Introduction to Russian history and literature
3. One approved subject other than Russian.

Candidates will normally be required to pass an examination in sections 1 and 3 before proceeding to further study.

The course of study for the second year of the four-year scheme, or first year of the three-year scheme, shall normally consist of:

1. Russian language
2. Russian literature with prescribed texts
3. Russian history
4. Either one or two approved subjects other than Russian.

Candidates taking the three-year scheme will study two approved subjects other than Russian. They will normally be required to pass a qualifying examination in all the above subjects before proceeding to further study. Candidates taking the four-year scheme may continue the study of the approved subject begun in their first year and add one new approved subject, or they may discontinue the approved subject studied in their first year and begin a new approved subject. In both cases, before proceeding to further study, they will normally be required to have passed a qualifying examination in the two approved subjects and in sections 1, 2 and 3.

During the final two years the course will consist of:

1. Russian language
2. Nineteenth- and twentieth-century Russian literature with prescribed texts
3. History of Russia, 1856–1905

4. Two special subjects to be chosen from the following with the approval of the head of the department:
   (a) History of the Russian language
   (b) Medieval Russian literature with prescribed texts
   (c) The development of nineteenth-century Russian radical thought
   (d) Russian history, 1905-1941.

Candidates who take special subject (a) will normally also take special subject (b); those who take special subject (c) will normally also take special subject (d).

In addition, candidates taking the three-year scheme will be required to study a subsidiary subject to be approved by the head of the department from section 4 of the first-year scheme. Candidates taking the four-year scheme will, during their third year, either complete a three-year course in the subsidiary subject begun in their first year or continue the study of the subject begun in their second year, completing a three-year course in this subject in their fourth year. All candidates, when they have completed the course in the subsidiary subject which they elect to take for three years, shall present themselves for the necessary examination.

Students will be required when possible to attend an approved Russian summer school during the long vacation preceding their final year. The cost is not included in the normal fee for an arts course.

Candidates may be required to attend courses of lectures given in other departments which may be helpful to their studies in the subjects of the school.

*Examinations*

The preliminary examination in Russian at the end of the first year of the four-year scheme shall consist of an oral examination and the following papers:
Composition and grammar (1 paper)
Translation from Russian (1 paper)

The qualifying examination in Russian at the end of the second year of the four-year scheme (or first year of the three-year scheme) shall consist of an oral examination and the following papers:
Composition and translation (1 paper)
Russian history and institutions (1 paper)
Russian literature with prescribed texts (1 paper)

The final examination will consist of an oral examination and the following papers:
Composition (1 paper)
Unprepared translation (1 paper)
Essay in Russian (1 paper)
Literature (3 papers including one paper on Tolstoy and Dostoievsky)
History of Russia, 1856-1905 (1 paper)
Special subjects (2 papers)

A candidate may, with the approval of the head of the department, offer a dissertation instead of one of the special subject papers.

**MODERN LANGUAGES AND LITERATURES:** There are schemes of study extending over a period of three years, leading to the degree of Bachelor of Arts in special studies in any two of the following subjects: French, German, Italian, Spanish and Russian.

## *Course Requirement*

Passes in two approved subjects at advanced level are required, but passes in three are preferred. Candidates for a degree in which French, German, Italian or Spanish forms a principal part must have passed at advanced level in the appropriate languages; in the case of French, Italian and Spanish candidates must have passed at ordinary level in Latin, and in the case of Russian candidates must possess a qualification equivalent to advanced level in Russian. Candidates wishing to follow a scheme of study where Russian forms a principal part who have no knowledge of Russian may be admitted to a four-year scheme.

## *Schemes of Study*

Students taking two foreign languages in the school of special studies in modern languages and literatures will be required to attend courses in an approved university for an approved period of not less than one university term in one of the countries whose language is being studied and are further recommended to spend the long vacation in the other country. The cost of residence abroad is not included in the normal fee for an arts course.

### *French*

First year

1. Translation into French
2. Translation into English and *explication*
3. Phonetics and Old French
4. History of the French language
5. A period or periods of French literature and thought.

Second year

1. Translation into French
2. Translation into English
3. History of the French language
4. Old French
5. Phonetics

6. 7. Two special subjects, selected with the approval of the head of the department, from the following:*
   (a) Sixteenth-century poetry
   (b) Seventeenth-century literature
   (c) Eighteenth-century novel
   (d) Eighteenth-century drama
   (e) Eighteenth-century thought
   (f) Twentieth-century drama
   (g) Semantics.

Students will also be required to follow courses in *Explication de textes* and Stylistics.

Third year

1. Translation into French
2. Translation into English
3. History of the French language
4. Old French
5. 6. Two special subjects, selected with the approval of the head of the department, from the following:*
   (a) Sixteenth-century prose
   (b) Seventeenth-century literature
   (c) Nineteenth-century novel
   (d) Nineteenth-century poetry
   (e) Twentieth-century literature
   (f) Twentieth-century novel
   (g) Twentieth-century thought
   (h) Provençal
   (i) Romance philology. This course will be open to those who offer Latin, Spanish or Italian as their other special studies subject
   (j) Contemporary history and institutions
   (k) Phonetics
   (l) *Explication de textes.*

*Italian* or *Spanish*

The course of study and subjects of examination in Italian or Spanish shall be: prescribed texts of various periods, studied from a literary and linguistic standpoint; literature; drama; history of the language; translation; civilization.

*German*

For students taking German in the special studies school of modern languages and literatures, there shall be in the second and third years alternative schemes of study, scheme A and scheme B, related to the schemes of study in the school of special studies in German. In scheme A special attention will be paid to literature, in scheme B to philology and medieval literature.

*Not all the subjects in these lists will necessarily be available in any one year, and new subjects may be added from time to time.

*English**

For students in the school of special studies in modern languages and literatures there shall be in the English portion of their course alternative schemes of study, scheme A, scheme B, and scheme C, related to the schemes of study for the degree in special studies in English. In scheme A special attention will be paid to literature. In scheme B the emphasis will be on philology and medieval literature. Scheme C is almost wholly devoted to literature from Chaucer to the present day.

Candidates will be required to attend:

During their first year, courses of not less than three hours a week in English language and medieval literature, and three hours a week in English literature and composition.

During their second and third years, courses of not less than five hours a week in English language and literature, the proportion to be determined by the candidate's choice of scheme and of subjects within the scheme.

*Russian*

In the case of candidates with no knowledge of Russian, the first year of work in the department of Russian will be devoted to an intensive study of the language. These candidates will attend courses on Russian philology and literature in their second, third and fourth years. They will normally take their final examination in their other language at the end of the third year and their final examination in Russian at the end of the fourth year. The class list will be published only after the final examination in Russian and will be based on the results of both examinations.

*Examinations*

Conspicuous merit shown in any part or parts of the examination by candidates who are placed in the first or second class will be signalised on the class list by some special mark.

A qualifying examination in both special studies schools must normally be passed by candidates at the end of the first year before they proceed to further study.

*French*

The qualifying examination in French at the end of the first year will consist of an oral examination and the following papers:

1. Translation from and into French
2. *Explication de textes*
3. History of the French language, and Old French
4. Literature, including a literary essay in French
5. Phonetics (1½ hours).

*This course will be in abeyance until further notice.

The final examination will consist of an oral examination and the following papers which, unless otherwise indicated, will be of three hours each:

1. Translation into French
2. Translation into English and essay
3. History of the French language ($2\frac{1}{4}$ hours)
4. Old French (including Old French unseen translation)
5. Second-year special subjects
6. 7. Third-year special subjects (2 hours each).

*German*

The qualifying examination at the end of the first year shall consist of an oral examination, a practical test in phonetics and the following four papers:

Composition and essay (1 paper)
Unprepared translation (1 paper)
Prescribed modern texts (1 paper)
Middle High German and phonetics (1 paper).

No candidate shall be regarded as having satisfied the examiners unless he reaches an adequate standard in German prose composition and essay.

The final examination at the end of the third year shall consist of an oral examination and the following papers:

*Scheme A*

Literature and modern texts (3 papers)
Middle High German (1 paper)
Composition (1 paper)
Unprepared translation and essay in German (1 paper).

*Scheme B*

Old High German (1 paper)
Middle High German (1 paper)
History of the German language (1 paper)
German texts since 1700 (1 paper)
Composition (1 paper)
Unprepared translation and essay in German (1 paper).

No candidate shall be regarded as having satisfied the examiners unless he reaches an adequate standard in German prose composition and essay.

*Italian*

The qualifying examination in Italian at the end of the first year shall consist of an oral examination and the following papers:

Composition and unseen translation (1 paper)
Literature, drama and prescribed texts (1 paper)
Italian civilisation (1 paper)
Essay in Italian (1 paper).

The final examination at the end of the third year shall consist of an oral examination and the following papers:
Composition and unseen translation (1 paper)
Literature, drama and prescribed texts (3 papers)
Italian civilisation (1 paper)
History of the language (1 paper)
*or* Essay in Italian on a prescribed subject (1 paper).

*Russian*

The preliminary examination at the end of the first year of the four-year scheme shall consist of an oral examination and the following papers:
Composition and grammar (1 paper)
Translation from Russian (1 paper).

The qualifying examination at the end of the second year of the four-year scheme (or the first year of the three-year scheme) will consist of an oral examination and the following papers:
Composition and translation (1 paper)
Russian literature with prescribed texts (1 paper).

The final examination will consist of an oral examination and the following papers:
Composition (1 paper)
Unprepared translation (1 paper)
Essay in Russian (1 paper)
Literature (2 papers)
A special subject (1 paper) selected from the following:
1. History of the Russian language
2. History of Russia, 1856-1905 *or* 1905-1941
3. Tolstoy and Dostoievsky.

A candidate's choice will be subject to the approval of the head of the department.

*Spanish*

The qualifying examination at the end of the first year will consist of an oral examination and the following papers in Spanish:
Translation (1 paper)
Modern literature and prescribed texts (1 paper)
History of the language (1 paper)
Essay (1 paper).

The final examination at the end of the third year will consist of an oral examination and the following six papers:
Translation into Spanish (1 paper)
Translation from Spanish and essay (1 paper)
Golden Age literature (1 paper)
1 paper selected from: Medieval literature, history of the language, Portuguese language
2 papers selected from: Hispanic American literature, Spain in the New World, Valle-Inclán, Twentieth-century Spanish literature.

*English, schemes A and C*

See special studies in English, pages 347 and fol.

Candidates will take two papers at the end of their second academic year (the part 1 examination), and at the end of their third academic year (the part 2 examination) will take Shakespeare and Chaucer (scheme A) or Chaucer and Middle English texts (scheme C), and two other papers. If they are taking scheme A they must in addition take the paper in either Old English or history of English.

*English, scheme B*

The examination at the end of the third academic year will consist of:

Selected texts in Old English, with literary, historical and linguistic questions suggested by them, as for special studies in English, scheme B (1 paper)
Selected texts in Middle English, with literary, historical and linguistic questions suggested by them, as for special studies in English, scheme B (1 paper)
English philology, as for special studies in English, scheme B (1 paper)
Two selected periods, as for special studies in English, scheme A (1 paper)
One paper selected from the following:
Chaucer and the fifteenth century (1 paper)
Shakespeare and the Elizabethan drama (1 paper).

A paper on *either* Germanic philology with special reference to Old English, *or* any of the special subjects laid down for special studies in English, scheme B. (Candidates taking French may not select Old French, and candidates taking German may not select Old High German, and candidates taking Russian may not select Russian and Old Bulgarian.)

**HISTORY:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in special studies in History.

*Course Requirement*

Passes in two approved subjects at advanced level are required. These passes may be in any approved subject. Candidates must, however, provide evidence of a reading knowledge of two languages other than English. This requirement will normally be met by a pass at advanced level in one language and a pass at ordinary level in another.

*Examinations*

The examinations for the degree of Bachelor of Arts in special studies in history will normally be taken at the end of the candidate's first and third years respectively. The first-year examination will be treated as a qualifying examination and candidates will be advised on their subsequent courses of study on the basis of their performance therein.

The first-year examination:

1. Two papers, selected with the approval of the chairman of the school of history from:
   The ancient world
   Medieval Europe
   Early modern Europe (to *c.* 1789)
   The modern world
2. (1 paper) A special subject selected from a prescribed list. Prescribed in 1964-5:
   Evolution of the English landscape
   Medieval life and thought
   Expansion of Europe (1492-1783)
3. The prescribed examinations on approved one-year courses in two other subjects.

Students are also required to attend an introductory course in British history and a class for the study of a text in a language other than English.

The final examination:

1. The history of Britain (3 papers):
   (a) from the earliest times to 1399
   (b) from 1399 to 1688
   (c) from 1688
2. One of the following subjects in European history* (1 paper):
   (a) Greek history from 478 B.C. to 362 B.C.
   (b) Roman history from 133 B.C. to 44 B.C.
   (c) The Carolingians
   (d) The Church in the later Middle Ages
   (e) Religion and the State in Western Europe, *c.* 1500 to *c.* 1650
   (f) The history of Europe 1660-1815
   (g) The history of Europe 1815-1918
3. One of the following subjects in world history* (1 paper):
   (a) History of the United States of America from 1783
   (b) History of Eastern Asia from 1840
   (c) History of Russia from 1856
   (d) Economic history of the modern world (1850-1950)
4. One of the following special subjects* (2 papers):
   (a) The Augustan Age
   (b) The history and archæology of Roman Britain
   (c) The reign of King John 1259-1340
   (d) The king's dominions overseas
   (e) The English Church in the fourteenth century

*Not all these subjects will necessarily be offered every year, and the lists may be varied from time to time.

(f) The North of England in the sixteenth and seventeenth centuries
(g) Patrons, architects and craftsmen in England 1660-1840
(h) Scientific and technical change in England, 1750-1830
(i) The French Revolution
(j) The Age of Peel
(k) The origins of the American Civil War
(l) British domestic history, 1906-1929

5. The history of political *or* scientific thought *or* an additional paper from *either* 2 *or* 3
6. A dissertation *or* an additional paper from *either* 2 *or* 3.

Subject to the permission of the head of department, candidates may exercise the option of offering additional papers in European and/or world history under both 5 and 6.

**PHILOSOPHY:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in special studies in Philosophy.

There is no first-year scheme of study in philosophy. Candidates wishing to to read for the degree of Bachelor of Arts in special studies in philosophy must enter the first year of the general and combined studies scheme or the first year of a degree in special studies in which philosophy is one of the first-year subjects. Candidates may be considered for transfer to special studies in philosophy at the end of the first year.

*Course Requirement*

The course requirements will be the same as those for admission to whichever scheme of study, whether general and combined studies or a degree in special studies in which philosophy is one of the first-year subjects, a candidate wishes to enter in his first year.

*Final Examination*

1. Essay
2. Logic and metaphysics
3. Ethics
4. Political and social philosophy
5. 6. History of philosophy (2 papers)
7. 8. *Two* of the following, to be chosen with the approval of the head of the department (one paper each):
   Psychology, including philosophical psychology
   Aesthetics and principles of criticism
   Philosophy of language
   Philosophy of religion
   Philosophy of history
   Methodology of the social sciences

Philosophical aspects of physical science
Philosophical aspects of biological science
Mathematical logic, including philosophy of mathematics
The work of a selected philosopher
The philosophy of a selected country.*

In addition candidates must present themselves for an oral examination.

**GEOGRAPHY:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in special studies in Geography.†

## *Course Requirement*

For admission to the scheme passes in three approved subjects at advanced level are required although exceptionally candidates with two passes are considered.

*One* of these passes must be in geography.

The *second* and *third* may be in any approved Arts subject at advanced level. In addition a pass in French or German at ordinary level is required.

## *Scheme of Study*

First year

In the first academic year candidates must take, in addition to the course in geography, courses in two other subjects. Geology will normally be one of these subjects, the other being selected with the approval of the head of the department from among those approved for the degree of Bachelor of Arts in general or combined studies.

A qualifying examination in all these subjects, which must normally be passed by candidates before they proceed to further study, will be held at the end of the first year.

Second year

In the second academic year, in addition to the courses in geography, candidates must take an approved course in one other subject in the Faculty of Arts. This will normally be a second-year course in one of the subjects studied in the first year. The course will be examined at the end of the second year and its result assessed with those of the final examination.

Third year

In the third academic year candidates confine their studies to geography, and have some opportunity of specialising in the different branches of the subject. At the end of this year candidates will present themselves for the final examination which consists of the following:

Physical geography (1 paper)
Human geography (1 paper)
Development of geographical thought (1 paper)
Cartographic and field methods (1 paper)
Geography of selected areas (2 papers)

*This paper will assume a knowledge of the language of the selected country.

†For information regarding the scheme of study leading to the degree of Bachelor of Science in geography (one main subject), see page 511.

*Two* of the following:

Cartography
Historical geography of Britain
Geography of planning
Problems of economic geography
Problems of political geography
Problems of geomorphology
Problems of the geography of population
Vegetation-soil complexes

} 1 paper each

In addition, candidates may be required to present themselves for an oral examination.

A competent reading knowledge of one modern foreign language is essential. During the course candidates must show that they have such knowledge.

Field work is an integral part of the degree course in special studies and will be tested in the final examination. All students must attend field training courses in each of the three years; the third-year course will normally be spent abroad.

**CHINESE STUDIES:** A scheme of study extending over a period of four years and leading to the degree of Bachelor of Arts in special studies in Chinese Studies.

## *Course Requirement*

For admission to the scheme passes in two approved subjects at advanced level are required. These passes may be in any approved subject.

In addition a pass in a language other than English at ordinary level is required.

## *Scheme of Study*

First year

1. Chinese language
2. Chinese studies } 3 papers and an oral examination
3. One approved subject selected from:
   - Economics
   - Geography
   - History*
   - Politics
   - Sociology (2 papers)
4. Another approved subject chosen from the list in (3) above† (2 papers).

*The first-year examination in history will consist of two papers:

A. Medieval *or* Modern European History, as prescribed for the first-year examination in general and special studies.

B. Introduction to the history of Eastern Asia in modern times.

†In exceptional circumstances, and with the approval of the head of the department of Chinese studies, some other first-year subject may be taken in place of those mentioned in (3) above.

Candidates will normally be required to pass examinations in sections 1, 2, 3 and 4 of the first year before proceeding to further study.

The scheme of study for the second, third and fourth years of the scheme will normally consist of:

1. Chinese language and Chinese studies.
2. Chinese studies (economic, social and political institutions and history).
3. History of Chinese thought and literature with special reference to the period since 1890.
4. A second subject selected from those taken in the first year, (3) above.

Candidates will normally be required to present themselves for the final examination in their second subject at the end of the third or at the end of the fourth year by arrangement between the heads of departments concerned.

The final degree examination in Chinese language and Chinese studies will consist of 5 papers:

1. Translation from Chinese
2. Chinese prose composition
3. Prescribed texts
4. History of Chinese thought and literature with special reference to the period since 1890
5. Chinese studies (economic, social and political institutions and history)

together with an oral examination.

The final examination in the second subject (5 papers) will consist of:

Economics
- Economic theory
- Industry and industrial relations
- Money and finance

Two subjects selected with the approval of the head of department from the following:
- Economic development
- Comparative industrial relations and labour problems of development
- The centrally planned socialist economies*

Geography
- Human geography
- Physical geography
- Geography of Eastern Asia
- Historical geography of China

One subject selected with the approval of the head of department from the following:
- Problems of economic geography
- Problems of political geography
- Urban geography
- Development of geographic thought

*Not available until 1966-67.

History

Three papers in Chinese history, one of which will relate to a special aspect of Chinese history studied in relation to prescribed texts.

Two papers selected with the approval of the head of department from the following:

Economic history of the modern world
British history from 1688
History of Europe 1815-1918
Russian history from 1856
History of the U.S.A. from 1783

Politics

Politics I
Politics II
Political and social theory
The government of China
Comparative political institutions with special reference to Asian countries and to the Soviet Union

Sociology

Sociology (2 papers)
Methods of social investigation (1 paper)
The social structure of China

One subject selected with the approval of the head of department from the following:

Demography 2
Sociological problems of developing societies
The institutions of advanced societies

In addition candidates will be required to submit an extended essay on a subject approved by the head of the department of Chinese studies.

**THEOLOGY:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in special studies in Theology.

## *Course Requirement*

For admission to the scheme passes in two approved subjects at advanced level are required. These passes may be in any approved subject.

## *Scheme of Study*

First year
Old Testament 1 (Hebrew)
New Testament Greek or Greek 1
History of religion 1
Philosophy *or* a one-year course in some other subject approved by the head of the department

| | |
|---|---|
| Second year | Old Testament 2, option (i) or (ii) |
| | New Testament language and literature 1 |
| | Church history 1 |
| | Biblical and historical theology |
| *Either* | Philosophy of religion 2 |
| *or* | History of religion 2 |
| Third year | Old Testament 3, option (i) or (ii) |
| | New Testament language and literature 2 |
| | Church history 2 |
| | Biblical and historical theology |
| *Either* | Philosophy of religion 3 |
| *or* | History of religion 3 |

In special cases, on the recommendation of the head of the department of theology, the requirement to take Hebrew in the first year may be waived by the Board of the Faculties of Arts, Economic and Social Studies and Law, and an alternative course substituted. For the second and third years, the options Old Testament 2, (i) or (ii) and 3, (i) or (ii) are available. The final decision regarding the options to be taken shall rest with the head of the department of theology.

A knowledge of Greek and Hebrew is not required for admission to the course.

Students of the theological colleges proceeding to the degree of Bachelor of Arts in special studies in theology will be required to take their first-year courses at the University except that they may take New Testament Greek and one other subject in their colleges. In their second and third years they must attend at least four hours of lectures a week at the University.

### *Examination*

| | |
|---|---|
| First year | Old Testament 1 (Hebrew) |
| | New Testament Greek or Greek 1 |
| | History of religion 1 |
| | An additional subject |

The final examination, at the end of the third year, will consist of ten papers:

1. Old Testament
2. Old Testament prescribed texts in Hebrew or English
3. New Testament
4. New Testament prescribed texts in Greek

5 and 6. Church history (2 papers)

7 and 8. Biblical and historical theology (2 papers)

9 and 10. Philosophy and history of religion:

*Either* Philosophy of religion (2 papers)

*or* History of religion (2 papers)

**MUSIC:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in special studies in Music.

### *Course Requirement*

For admission to the scheme passes in two approved subjects at advanced level are required

*One* of these passes is normally expected to be in music.
The *second* may be in any approved subject at advanced level.
In addition evidence of musical proficiency will be required.

### *Scheme of Study*

The courses for the first year shall normally include music and two additional approved subjects in the arts or sciences; one of the additional subjects may with advantage be a foreign language.

At the end of the first year a qualifying examination in these three subjects will be held which must normally be passed by candidates before they proceed to further study.

In addition to musical studies each candidate in the second year must pursue for a further year a prescribed course in one of the subjects approved for the first year and pass an examination.

**FINE ART:** A scheme of study extending over a period of four years and leading to the degree of Bachelor of Arts in special studies in Fine Art.

### *Course Requirement*

For admission to the course passes in three approved subjects at advanced level are required.

These passes may be in any approved subjects. It is desirable, however, that one of these should be a modern foreign language.

### *Scheme of Study*

First year

1. Fine art including:
   *(a) An outline of the history of art and architecture from the earliest times until the Renaissance (2 lectures a week)
   *(b) The elements of art criticism (1 lecture a week)
   (c) Practical work as prescribed by the head of the department.

2. 3. Two approved subjects in the Faculty of Arts, one of which may with advantage be a language other than English; the subjects must be selected in such a way as would enable a candidate, if necessary, to satisfy the requirements of the degree of Bachelor of Arts in general studies or in combined studies.

*These courses form the course in fine art for the degree of Bachelor of Arts in general studies, and fine art as a subsidiary subject for a first degree.

Second year

*1. History of painting and sculpture: the Renaissance in Italy and the North (2 lectures a week)
*2. History and appreciation of architecture (1 lecture a week)
*3. History of fashion (1 lecture a week)
4. Practical art criticism (1 lecture a week)
5. Practical work as prescribed by the head of the department
6. A course in a subject approved by the head of the department; this will normally be the first year of the two-year general course in one of the approved subjects taken in the first year.

In the long vacation at the end of the second year, candidates must also, under the direction of the head of the department of fine art, spend not less than six weeks in London studying original works of art; and submit satisfactory evidence of the thoroughness of this study.

Third year

*1. History of painting, sculpture and architecture from the High Renaissance to the present day (3 lectures a week)
2. Practical work as prescribed by the head of the department
3. A course in a subject approved by the head of the department: this will normally be the second year of the two-year general course in the approved subject taken in the previous year.

In the long vacation at the end of the third year, candidates must also, under the direction of the head of the department of fine art, spend not less than six weeks studying original works of art at an approved centre abroad; and submit satisfactory evidence of the thoroughness of this study.

Fourth year

1. Practical work as prescribed by the head of the department
*2. A historical study of the theory and teaching of art (1 lecture or tutorial a week).

## *Examinations*

First year

A qualifying examination will be held at the end of the first year, and candidates will be advised on their subsequent courses of study on the basis of their performance therein.

*1. The elements of art criticism and the history of art and architecture in Western Europe (1 paper)
*2. Oral examination
3. Practical test (3 hours). In addition candidates will be required to submit a portfolio representing the year's work.
4, 5. Two approved subjects.

*These courses form the course in fine art for the degree of Bachelor of Arts in general studies and fine art as a subsidiary subject for a first degree.

Third year

Part I of the final examination, which will relate to the syllabus covered in the second and third years, will be taken at the end of the third year.

*1. The history of painting, sculpture and architecture (2 papers)
2. An essay on an approved topic.
3. Candidates will also be required to submit for examination examples of practical work done during the year.
*4. Oral examination.

Fourth year

Part II of the final examination will be taken at the end of the fourth year.

†1. The theory and teaching of art (1 paper)
2. An examination of practical work carried out during the period of the course.
3. A dissertation on a theme approved by the head of the department.

In addition, at the end of the third year, candidates must present themselves for examination in the approved subject, as for a two-year course in a subject for the degree of Bachelor of Arts in general studies. The results of the Part I examination will be taken into account in the final assessment of the student's work.

Much of the necessary apparatus and materials required by students taking the degree of Bachelor of Arts, special studies, in fine art will be supplied by the department; but students will be expected to make a contribution towards the cost.

**MATHEMATICS:** There are two schemes of study leading to the degree of Bachelor of Arts in special studies in Mathematics, one extending over three years, the other extending over four years. The scheme to which a candidate is admitted will depend on the candidate's qualifications on entry.‡

*Course Requirement*

For admission to the schemes candidates must produce evidence of ability in mathematics.

Candidates will normally be expected to have taken mathematics, including both pure and applied mathematics either as one subject (Mathematics or Mathematics for Science) or as two subjects (Mathematics and Further Mathematics, Mathematics and Higher Mathematics, or Pure Mathematics and Applied Mathematics) at the advanced level in the General Certificate of Education examination. Candidates who offer Physics at advanced level instead of Applied Mathematics will be considered.

*These courses form the course in fine art for the degree of Bachelor of Arts in general studies and fine art as a subsidiary subject for a first degree.

†This paper will be taken by candidates for the degree of Bachelor of Arts in general studies in their final examinations.

‡For information regarding the scheme of study leading to the degree of Bachelor of Science in mathematics (one main subject), see page 505.

There are no special requirements restricting the choice of supporting subjects at advanced level. Nevertheless, some knowledge of physics, at least up to the ordinary level of the General Certificate of Education examination, is desirable.

### *Scheme of Study*

The prescribed courses in mathematics for the four-year scheme of study are Mathematics 1MM, 2MM, 3MM and 4MM taken in successive years, and for the three-year scheme of study Mathematics 2MM, 3MM and 4MM taken in successive years.

In addition to the prescribed special studies course in mathematics, a candidate must reach a satisfactory standard in a one-year course in an ancillary subject. The ancillary subject will be selected after consultation with the head of the department of mathematics from those approved under regulation 6 for the degree of Bachelor of Arts in general studies (see page 302).

**TEXTILE DESIGN:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in special studies in Textile Design.

### *Course Requirement*

For admission to the scheme passes in two approved subjects at advanced level are required. These passes may be in any approved subject.

In addition passes in mathematics and in general science at the ordinary level are desirable.

### *Scheme of Study*

First year
- Fine art 1
- Textile design and textile technology
  - Textiles 1T comprising:
    - Raw materials 1A
    - Yarn manufacture 1T
    - Fabric manufacture 1T
    - Textile chemistry 1A
  - Textile calculations 1A
  - Colour study 1T
- *One* of the following:
  - General economics or Industrial management I
  - Psychology
  - An approved modern language
  - Another approved subject.

Second year
- Fine art 2
- Textile design and textile technology:

Raw materials 2T
Woollen yarn manufacture 2T } or Staple fibre yarn
Worsted yarn manufacture 2T } manufacture 2T
Cloth analysis 1T
Cloth structure 1T
Colour study 2T
Weaving mechanisms 1T
Knitting 1A
Textile calculations 1B
Textile testing 1A
Textile design

*One* of the following by arrangement with the head of the department concerned:

English economic history 1066–1914 or Industrial management II
Industrial psychology
An approved modern language
Another approved course.

Third year — Textile design and textile technology:

Woollen yarn manufacture 3T } or Staple fibre yarn
Worsted yarn manufacture 3T } manufacture 3T
Weaving mechanisms 2T
Cloth analysis 2T
Cloth structure 2T
Complex textiles or Knitting 2T
Textile chemistry 2A
Dyeing 1TD
Cloth finishing 1T and 2T
Mill management
Textile design

Candidates shall also be required to submit a thesis based on original work in textile design.

## *Examinations*

A qualifying examination in the subjects in which courses have been prescribed in the first year will be held at the end of the first year and must normally be passed by candidates before they proceed to further study.

At the end of the second year candidates will take the part 1 examination:

Fine art (2 papers)
An optional subject (1 paper)

Candidates must normally pass this examination before they proceed to further study.

At the end of the third year candidates will take the part 2 examination:
Fibre science, dyeing, and finishing (1 paper)
Raw materials, and woollen and worsted yarn manufacture, *or* staple fibre yarn manufacture (1 paper)
Weaving mechanisms, cloth structure, and textile calculations (1 paper)
Textile testing and mill management (1 paper)
Textile design (1 paper)
Two practical examinations:
Cloth analysis
Colour study, and complex textiles *or* knitting
A thesis on textile design
An oral examination

The candidate's performance in the subjects taken outside the department of textile industries will be taken into account.

**TEXTILE MANAGEMENT:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in special studies in Textile Management.

*Course Requirement*

For admission to the scheme passes in two approved subjects at advanced level are required. These passes may be in any approved subject.

*Scheme of Study*

| | |
|---|---|
| First year | Industrial management I<br>Textile technology (12 hours a week of lectures and laboratory work)<br>An approved modern foreign language or other approved course. |
| Second year | Industrial management II<br>Textile technology (15 hours a week of lectures and laboratory work)<br>An approved modern foreign language or other approved course. |
| Third year | Industrial management III<br>Textile technology and Mill management (20 hours a week of lectures and laboratory work). |

Candidates shall also be required to submit a thesis based on original work in industrial management.

*Examinations*

A qualifying examination in the subjects in which courses have been prescribed in the first year will be held at the end of the first year and must normally be passed by candidates before they proceed to further study.

At the end of the second year candidates will take part 1 of the final examination:

Textile technology (2 papers)
Optional subject (1 paper)

Candidates must normally pass this examination before they proceed to further study.

At the end of the third year, candidates will be examined as follows in part 2 of the final examination:

Fibre science, dyeing, and finishing (1 paper)
Raw materials, woollen and worsted yarn manufacture *or* staple fibre yarn manufacture (1 paper)
Weaving mechanisms, cloth structure, and textile calculations (1 paper)
Textile testing and mill management (1 paper)
Two practical examinations:
  Cloth analysis
  Colour study and complex textiles *or* Knitting
Industrial management (3 papers)
Thesis in industrial management
Oral examination.

The candidate's performance in the subjects taken outside the departments of textile industries and economics will be taken into account.

Regulations prescribing schemes of study and particulars of courses of lectures for the degree of Bachelor of Arts in special studies in economics, economics with statistics, sociology and political studies, and for the degree of Bachelor of Arts in combined studies in geography and politics, geography and sociology, philosophy and politics, psychology and sociology, and sociology and philosophy, will be found on pages 430-40, and in the prospectus, *The Faculty of Economic and Social Studies.*

# PRESCRIBED SCHEMES OF EXAMINATION FOR THE DEGREE OF MASTER OF ARTS

Candidates proceeding to the degree of Master of Arts by examination alone will be required to take the following papers at their final examination:

## GREEK

1. Prescribed Greek books [translation and questions] (2 papers)
2. General paper (1 paper)
3. Greek unprepared translation (1 paper)
4. Greek prose composition (1 paper)
5. Special subject (2 papers)
6. An oral examination.

## LATIN

1. Prescribed Latin books [translation and questions] (2 papers)
2. General paper (1 paper)
3. Latin unprepared translation (1 paper)
4. Latin prose composition (1 paper)
5. Special subject (2 papers)
6. An oral examination.

## SEMITIC LANGUAGES AND LITERATURES

1. Comparative Semitic philology; epigraphy; Hebrew composition (1 paper)
2. Prescribed and unprescribed books from the Old Testament (1 paper)
3. Prescribed and unprescribed portions of Aramaic (1 paper)
4. Prescribed and unprescribed portions of post-biblical and modern Hebrew (1 paper)
5. Hebrew literature (1 paper)
6. Syriac or Arabic composition and prescribed texts (1 paper)
7. An oral examination.

## ENGLISH

Scheme A [literature]

1. Selected period of English literature (1 paper)
2. Selected author (1 paper)
3. Special subject (1 paper)
4. American literature (1 paper)
5. Commonwealth literature (1 paper)

All candidates will normally take not less than three of these papers, and candidates who are not graduates in special studies in English of this University, nor holders of its postgraduate diploma in English studies, must take not less than four papers.

6. An extended essay on a literary theme, to be presented before the end of the second term. The subject must normally be approved by the head of the department before the end of the first term.
7. An oral examination.

In addition, all candidates must attend a seminar on scholarly method throughout one year and perform satisfactorily the exercises required.

Scheme B [language]

1. Old English texts (1 paper)
2. Middle English texts (1 paper)
3. Old English and Middle English literature with translation from unspecified texts (1 paper)
4. English philology (1 paper)
5. Old Icelandic (1 paper)
6. Special subject (1 paper)

**FRENCH**

1. Composition (1 paper)
2. Unprepared translation (1 paper)
3. Essay in French (1 paper)
4. A specific period or periods of French literature, thought and civilisation, approved by the head of the department (1 paper)
5. An aspect of the period or periods chosen under 4 (1 paper)
6. A special subject (1 paper) *or* a short dissertation connected with 4 or 5
7. Oral examination in French which will bear on the subjects of study.

**SPANISH**

1. Composition (1 paper)
2. Unprepared translation (1 paper)
3. Essay in Spanish (1 paper)
4. Spanish literature (3 papers)
5. A period of Spanish thought and civilisation (1 paper)
6. An oral examination.

**ITALIAN**

1. Composition (1 paper)
2. Unprepared translation (1 paper)
3. Essay in Italian (1 paper)
4. Prescribed texts (2 papers)
5. Special subject (1 paper)
6. A period or periods of Italian literature (1 paper)
7. An oral examination.

**GERMAN**

1. Composition (1 paper)
2. Unprepared translation (1 paper)
3. Essay in German (1 paper)

4. Middle High German [with detailed study of a prescribed author or texts; *either* Wolfram von Eschenbach *or Das Nibelungenlied* and *Kudrun*] (1 paper)
5. *Either* modern German literature (3 papers)
   *or* Germanic philology (1 paper)
   History of the German language (1 paper)
   Period of modern German literature (1 paper)
6. An oral examination.

**RUSSIAN**

1. Translation into Russian
2. Translation from Russian
3. Essay in Russian
4. History of the Russian language with prescribed texts
   *or* Soviet institutions
5. A period of Russian history selected with the approval of the head of department
6. The Russian novel, 1856-81
   *or* Russian poetry, 1743-1914
   *or* The Russian short story, 1825-1904 and Russian drama, 1750-1904
7. An oral examination which will bear upon the above papers.

**HISTORY**

1. General paper
2. English history, medieval and modern (2 papers)
3. Sources of English history
4. *Either* ancient history [to A.D. 337]: general (2 papers), with special period in ancient history (2 papers)
   *or* medieval history [A.D. 300 to 1500]: general (2 papers) with special period in medieval history (2 papers)
   *or* modern history [since A.D. 1500]: general (2 papers), with special period in modern history (2 papers)
5. An oral examination.

**PHILOSOPHY**

1. A paper on a selected philosophical authority
   *or* a selected period of philosophical thought
   *or* a selected period in the history of science.
2. *Two* papers chosen from the following list:
   Moral philosophy
   Philosophy of religion
   Metaphysics and epistemology
   Political philosophy
   Logic
   Philosophy of science
   Aesthetics
   Philosophy of mind

3. A dissertation on a philosophical subject approved by the Board of the Faculties of Arts, Economic and Social Studies and Law.
4. An oral examination.

## GEOGRAPHY

1. A dissertation on a subject approved by the Board of the Faculties of Arts, Economic and Social Studies and Law.
2. Two papers, one of which will be on the general field of study, and the other on the field specifically related to the subject of the candidate's dissertation.
3. An oral examination.

## THEOLOGY

1. An essay (1 paper)
2. Selected Old Testament subject in English (1 paper)
3. Selected New Testament subject with Greek text (1 paper)
4. Selected period of church history (1 paper)
5. Selected period or subject of Christian doctrine (1 paper)
6. *Two* of the following subjects (1 paper each):
   - A portion of the Old Testament in Hebrew
   - A portion of the Old Testament in Greek
   - A selected non-Christian religion
   - Selected patristic texts
   - Philosophy of religion
7. An oral examination.

## PSYCHOLOGY

1. Psychological theory (1 paper)
2. A related philosophical subject (1 paper)
3. A special subject approved by the head of the department (1 paper)
4. *Three* of the following:
   - Biological psychology (1 paper)
   - Experimental psychology (1 paper)
   - Psychometrics (1 paper)
   - Social psychology (1 paper)
   - Applied psychology (1 paper)
   - Epistemic theory (1 paper)
5. A short dissertation to be completed during the final year
6. An oral examination.

## MUSIC

1. General paper (1 paper)
2. Special period (1 paper)
3. Special subject (1 paper)
4. Composition (2 papers)
5. An oral examination
6. Orchestration (1 paper)

In place of the papers dealing with composition and orchestration candidates may submit an original composition for orchestra, chorus, orchestra and chorus, or chamber combination of not less than thirty minutes' duration. Permission to submit such a composition must be sought when applying to enter for the examination.

## MATHEMATICS

Not less than four papers on the two branches of mathematics in which the candidate has pursued an approved course of study.

## ECONOMICS

1. An essay (1 paper)
2. General economics (2 papers)
3. *Two* papers on any *one* field of work selected from the following:
   - Economic history
   - History of economic thought
   - Economic development
   - Econometrics
   - Industrial relations
   - Money and banking
   - International economics
   - Public economics
4. *One* paper on a special subject related to the field of work selected under 3 above
5. An oral examination.

## SOCIOLOGY

1. Three papers, one of which will be on the general field of study, and two on special subjects: one of the latter will be related to the subject of the candidate's dissertation
2. A dissertation on a subject approved by the Board of the Faculties of Arts, Economic and Social Studies and Law
3. An oral examination.

## POLITICS

1. Three papers, one of which will be on the general field of study, and two on special subjects: one of the latter will be related to the subject of the candidate's dissertation
2. A dissertation on a subject approved by the Board of the Faculties of Arts, Economic and Social Studies and Law
3. An oral examination.

# REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR DIPLOMAS AND CERTIFICATES

## DIPLOMA IN HEBREW

The diploma in Hebrew is designed to meet the requirements of those who desire a practical acquaintance with the Hebrew language and literature and the history of the Jewish people and their institutions.

Candidates must furnish evidence satisfactory to the Senate of educational qualifications sufficient to enable them to profit by the course.

The scheme of study will normally extend over two years and will consist of five lectures a week of one hour each, including one hour of conversation to be given in the University. A candidate producing evidence of having attained in Hebrew the equivalent of a pass in the General Certificate of Education at the Advanced level before beginning the course may, upon application to the Senate, be exempted from a portion of the course and qualify for the diploma after a period of study which will not, in any case, be less than one year.

The scheme of study will include:

First year: elementary biblical Hebrew, grammar including syntax, composition, re-translation and pointing of prescribed portions, translation of prescribed prose passages of Old Testament and post-biblical Hebrew; introduction to Jewish literature; outline of Jewish history to A.D. 130.

Second year: prescribed poetical passages from the Old Testament; prescribed books of modern Hebrew; comparative Hebrew grammar and syntax; modern Hebrew; outline of Jewish history from A.D. 130 and of the development of Jewish religious ideas and institutions.

*Examination*

Part 1 of the examination will be held at the end of the first year and part 2 at the end of the second year of the course. Candidates exempted as above from a portion of the course may be required to present themselves for parts 1 and 2 of the examination in the same year. Each examination will consist of two papers.

The diploma will be awarded to candidates who have completed the requisite period of study and have passed both parts of the examination.

## CERTIFICATE IN THE TEACHING OF HEBREW

Candidates who obtain the diploma in Hebrew may proceed to a third year of study for a Hebrew teacher's certificate. This certificate may also be taken, without the diploma, by candidates who hold an academic qualification which is regarded by the Senate as equivalent to the diploma.

The syllabus for the course, which will extend over two hours a week for three terms, will comprise more advanced classical and modern Hebrew; ten lectures on the general principles of education to be given by the department of education of the University; about twenty lectures on the methods and history of teaching the regular subjects of the Jewish school to be given by a lecturer approved by the University; six months' practical training, under supervision at a local school.

## CERTIFICATE IN ARABIC

The certificate in Arabic is designed to meet the requirements of those who desire a practical acquaintance with the Arabic language and literature and with the history of the Arab peoples and their institutions.

Candidates must furnish evidence satisfactory to the Senate of educational qualifications sufficient to enable them to profit by the course.

The scheme of study will normally extend over two years, and will consist of five lectures a week of one hour each including one hour of conversation, to be given in the University.

A candidate producing evidence of having attained in Arabic the equivalent of a pass in the General Certificate of Education at the Advanced level before beginning the course may, upon application to the Senate, be exempted from a portion of the course and qualify for the certificate after a period of study which will not in any case be less than one year.

The scheme will include, in the first year, elementary classical Arabic grammar, composition and conversation in Arabic, classical texts and modern texts, Arab history and antiquities; and, in the second year, more advanced grammar, composition and conversation in Arabic, classical texts and modern texts, lectures on Arab institutions, reading of Arabic newspapers, journals and other publications.

### Examination

Part 1 of the examination will be held at the end of the first year, and part 2 at the end of the second year of the course. Candidates exempted from a portion of the course under regulation 4 may be required to present themselves for parts 1 and 2 of the examination in the same year. Each examination will consist of two papers.

The certificate will be awarded to candidates who have completed the requisite period of study and have passed both parts of the examination.

## DIPLOMA IN SPANISH

The diploma is designed to meet the needs of those who desire to increase their knowledge and to deepen their understanding of Spanish language and literature.

The scheme of study will be open to all candidates who can furnish evidence satisfactory to the Senate of educational qualifications, including a knowledge of Spanish, sufficient to enable them to profit by it. The University reserves the right to suspend the scheme in any year if the entry of students is regarded as insufficient.

The scheme will continue over two sessions and will consist of not less than two hours' tuition each week at the University during the normal academic terms.

Part 1 of the examination will be held at the end of the first year and part 2 at the end of the second year of the scheme of study; each part of the examination will include an oral test and a student must pass part 1 *in toto* before proceeding to the second year. The diploma will be awarded to those candidates

who are successful in the whole examination, after having attended satisfactorily throughout the scheme. The diploma may be awarded with distinction.

The scheme of study will include:

First year: Grammar, translation and composition, Spanish history and civilisation from 1500 to 1700 or from 1800 to 1960 and four literary texts to be studied with particular reference to their background.

Second year: Grammar, translation and composition, phonetics, Spanish literature from 1500 to 1700 or from 1800 to 1960 and eight literary texts to be studied with particular reference to their background.

## CERTIFICATE IN RUSSIAN

A certificate is awarded by the University to students who, after due preparation, can show in examination a thorough practical knowledge of the Russian language.

The scheme of study extends over not less than two sessions.

## DIPLOMA IN THEOLOGY

The scheme of study for the diploma in theology is intended primarily for students of theology who are not qualified to undertake the scheme leading to the degree of Bachelor of Arts in special studies in theology. In general, candidates reading for the diploma attend lectures given in the degree scheme, but they are required to cover less ground. The course includes New Testament Greek but not Hebrew.

Before entering upon the scheme of study, those candidates who are not qualified to enter upon a degree scheme must pass an entrance examination in the following subjects:

English Bible (1 paper)

Essay *or* English literature (1 paper)

One additional subject selected in consultation with the head of the department of theology (1 paper).

They must also, unless exempted by the head of the department of theology, pass an oral examination.

The scheme of study extends over three years and comprises four subjects in each year as set out below:

First year

1. Old Testament: history and religion of Israel to the Exile
2. New Testament Greek*
3. Church history 1: the pre-Nicene Church to A.D.313
4. History of religion

Second year

1. Old Testament: history and religion of Israel from the Exile to A.D.70
2. New Testament: introduction to the Gospels and Acts of the Apostles
3. Biblical and historical theology

*Prescribed book: H. P. V. Nunn, *The Elements of New Testament Greek.*

4. Church history 2: one option selected from the following as available:
   (a) the Christian Empire A.D. 313 to 604
   (b) Medieval Christendom A.D. 1054 to 1517
   (c) Reformation and Revival A.D. 1453 to 1789
   (d) the modern Church A.D. 1750 to the present day.

Third year

1. Old Testament: texts
2. New Testament: introduction to the Epistles and Apocalypse
3. Biblical and historical theology
4. *Either* Philosophy of religion
   *or* Comparative study of religion

Students of the associated theological colleges reading for the diploma will be required to take in the University at least one subject during their first year, two during their second and two during their third.

An examination will be held at the end of each year, and a candidate must normally pass each examination before being allowed to proceed to the following year. The diploma will be awarded to candidates who have complied with the attendance regulations and passed the first, second and third year examinations. It will be awarded with distinction to candidates of outstanding merit.

## POSTGRADUATE DIPLOMA IN SEMITIC STUDIES

All candidates must be graduates of the University of Leeds or of another approved university or must possess equivalent qualifications approved by the Senate.

Candidates will be required to attend the University of Leeds for at least one academic year of full-time study. In cases where candidates have shown sufficient merit during the course of this year, they may, by permission of the Board of the Faculty upon the recommendation of the head of the department of Semitic languages and literatures, be permitted to extend their studies and become candidates for the degree of Master of Arts.

Candidates shall attend the following courses and must satisfy the examiners in the examination and other tests prescribed:

(a) General scholarly method, with special reference to the editing of texts
    Bibliography
(b) Such of the following courses as may be prescribed by the head of the department of Semitic languages and literatures:
    Hebrew or Arabic or Aramaic-Syriac philology
    Comparative Semitic philology
    Hebrew or Arabic or Aramaic-Syriac palaeography, and the study of manuscripts
    Literary criticism
    Hebrew or Arabic phonetics
    Study of a particular period
    Study of a particular author

Contemporary Hebrew or Arabic language
Contemporary Hebrew or Arabic literature
Hebrew or Arabic history
Hebrew or Arabic archæology
The history of Hebrew or Arabic studies
Any other courses in the department regarded as relevant by the head of the department of Semitic languages and literatures
Any other courses outside the department (subject to the approval of the head of the department in question)

(c) An exercise in research on a subject in literature or language to be approved by the head of the department of Semitic languages and literatures.

The courses in (a) will normally be covered in one term. The courses in (b) will normally be covered in one year and generally not less than three nor more than five such courses will be prescribed. The exercise in (c) will normally be set before the end of the first term and must be handed in before the end of the second term.

A diploma with distinction may be awarded to a student whose work is judged to be of outstanding merit.

## POSTGRADUATE DIPLOMA IN ENGLISH STUDIES

All candidates must be graduates of the University of Leeds or of another approved university or must possess equivalent qualifications approved by the Senate.

Candidates will be required to attend the University of Leeds for at least one academic year of full-time study. In exceptional cases, by permission of the Board of the Faculty and upon the recommendation of the head of the department of English literature, or the head of the department of English language and medieval literature, they may extend their studies and become candidates for the degree of Master of Arts.

Candidates shall attend the following courses and must satisfy the examiners in the examinations and other tests prescribed:

A. Editorial and scholarly method
Bibliography.

B. Such of the following courses as may be prescribed by the professor of English literature or the professor of English language and medieval literature:
Criticism
Study of a particular period
Study of a particular author
Study of a particular genre
Shakespeare
Milton
Contemporary English literature*
American literature

*Only available to candidates whose native language is not English.

Commonwealth literature
Contemporary English language
English phonetics
The teaching of English as a foreign language
Any other course (subject to the approval of the head of the department concerned).

C. An exercise in research on a subject in literature or language to be approved by the head of the department of English literature or the head of the department of English language.

Note: The course in A will normally be covered in one term.
The courses in B will normally be covered in one year and generally not less than three nor more than five such courses will be prescribed.
The exercise in C will normally be set before the end of the first term and must be handed in before the end of the second term.

A diploma with distinction may be awarded to a student whose work is judged to be of outstanding merit.

## POSTGRADUATE DIPLOMA IN ENGLISH AS A SECOND LANGUAGE

All candidates must be graduates of the University of Leeds or of another approved university or must possess equivalent qualifications approved by the Senate.

Candidates will be required to attend the University of Leeds for at least one year of full-time study. By permission of the head of the department of English literature, or the head of the department of English language and medieval English literature, or the professor of contemporary English, they may extend their studies and become candidates for the degree of Master of Arts.

Candidates shall attend the following courses and must satisfy the examiners in the examinations and other tests prescribed:

A. Contemporary English language

B. Such of the following courses as may be prescribed by the professor of contemporary English;
Contemporary English literature
Stylistics
General course in education
English overseas
Second-language teaching

C. An exercise in research on a subject in literature or language to be approved by the head of the department of English literature or the head of the department of English language and medieval English literature, or the professor of contemporary English.

Two periods of teaching practice will be arranged during the year, at least one of which will normally take place in a country where English is not the mother tongue.

Note: The courses in B will normally be covered in one year and generally not less than three such courses will be prescribed. The exercise in C will normally be set before the end of the first term and must be handed in before the end of the second term.

The examination will consist of 4 written papers, an oral examination and the written exercise in research. The candidate's performance in teaching practice will also be taken into account.

A diploma with distinction may be awarded to a student whose work is judged to be of outstanding merit.

## POSTGRADUATE DIPLOMA IN FOLK LIFE STUDIES

All candidates must be graduates of the University of Leeds or of another approved university, or must possess equivalent qualifications approved by the Senate.

Candidates will be required to attend the University of Leeds for at least one academic year of full-time study. In exceptional cases, by permission of the Board of the Faculty and upon the recommendation of the Chairman of the School of English, they may extend their studies and become candidates for the degree of Master of Arts.

Candidates shall attend the following course and must satisfy the examiners in the examination and other tests prescribed:

A. Theory and principles of folk life studies.
The study and recording of source materials.
Preservation, classification, storage and archiving.

B. Such of the following optional courses as may be prescribed by the Chairman of the School of English:
English dialectology
Romano-British archæology
Anglo-Saxon art and archæology
Medieval archæology
Historical geography of Great Britain
Social geography
Social anthropology
Or any other approved course.

C. An exercise in research, based on fieldwork, on a subject to be approved by the Chairman of the School of English.

Note: The exercise C will normally be set before the end of the first term and must be handed in before the beginning of the third term.

The examination will consist of four written papers, an oral examination and the exercise in research.

A diploma with distinction may be awarded to a student whose work is judged to be of outstanding merit.

## GRADUATE CERTIFICATE IN EDUCATION

Candidates for the graduate certificate in education must be graduates of a university in the United Kingdom or must have obtained such other academic qualifications as shall be approved by the Senate of the University.

Students wishing to become specialist teachers of modern languages should normally have completed an approved period of residence abroad before admission to the graduate certificate course.

The session for students reading for the graduate certificate in education begins in mid-September and ends at the close of the University session.

The course for the graduate certificate in education is both theoretical and practical. There are three periods of teaching practice, together lasting for at least twelve weeks. The first is taken in a primary school immediately before the session begins; the others are taken in secondary schools in or near Leeds in the second part of the Christmas and Easter terms.

Lecture courses are provided as follows:

1. General courses

(a) Theory of education
(b) Educational psychology
(c) The English educational system, its recent history and social background
(d) The secondary school

These courses are attended by all students.

(e) Method courses

Courses are provided on methods of teaching the various school subjects; students are required to take *two* of these method courses. The course for scientists includes laboratory work.

There is also an optional course on the teaching of English, which is designed to help students who are not qualified in English but may be called upon to teach it as non-specialists in secondary modern schools.

2. Special courses

The following courses are held during the second and third terms, and each student is required to attend *one*. The choice of course is made during the first term:

Sociology of education
Further psychology
Comparative education
History of education before state intervention
Literature and civilisation
Greek for beginners
Science in the modern world (a course for non-scientists)
Statistics for beginners
(Other courses may be added)
History and philosophy of science.

This is a three-term course which is compulsory for scientists, and must be attended by all students who take science method courses. It can count as the student's special course—but he can elect to attend another special course as well if he so wishes.

3. Supplementary courses

Students may take one of these courses. No specialist knowledge (i.e. University study) of music or art is required.

(a) Art
(b) Music appreciation
(c) Drama
(d) Appreciation of architecture, sculpture and painting
(e) Outdoor activities (men and women)
(f) Games (women)
(g) Recreative physical activities (men).

4. Games and athletics

A special course in the coaching of games and athletics may be taken as part of the course for the graduate certificate in education. The course is limited to a small number of selected candidates. Further particulars may be obtained from the head of the department of physical education.

Candidates for the graduate certificate in education are required to submit by the end of the first week of the summer term *either* (i) a long essay of approximately 12,000 words, *or* (ii) three short essays, each of approximately 3,500 words *or* (iii) a comparable piece of work. Normally these studies will be concerned with method: i.e. with certain aspects of the teaching of particular subjects.

The written examination takes place in June. In order to qualify for the graduate certificate candidates must satisfy the examiners in the written examination (including tutorial essays and the long essay or its equivalent) and in practical teaching.

The list of successful candidates will be published in two divisions. The names in each will be placed in alphabetical order. A mark of distinction may be awarded to candidates who achieve a sufficiently high standard in the written examination and a mark of commendation to those who achieve a sufficiently high standard in practical teaching.

The Graduate Certificate will not be issued until the candidate has passed in both the written and the practical parts of the examination; but a candidate failing in one part only may, on the recommendation of the examiners, be allowed to present that part at a subsequent date.

Graduate students who are successful in this examination will be recommended to the Leeds University Institute of Education for the award of Qualified Teacher Status. The University examiners may bring before a Joint Examining Committee of the Department of Education and the Institute of Education the names of candidates who have not been successful in the examination for the Graduate Certificate or have not been eligible for it, to be considered for recommendation by the Board of the Institute of Education for the award of Qualified Teacher Status.

## GRADUATE CERTIFICATE IN EDUCATIONAL STUDIES

Candidates for the graduate certificate in educational studies must be graduates of a university in the United Kingdom or of another approved university or must possess academic qualifications approved by the Senate as equivalent.

Candidates must also have pursued and successfully completed a course of initial training as teachers in either this University or another approved university or have qualifications which are approved by the Senate as equivalent.

Candidates, since graduation or since obtaining qualified teacher status, must have had at least three years' experience either in approved full-time service as teachers in schools, or in some other approved work.

Candidates must pursue a course of full-time study extending over not less than one academic year.

All candidates shall attend the following courses, which will normally be covered in one year, and must satisfy the examiners in the examinations and other tests prescribed:

(a) Theory of education
(b) Educational psychology
(c) Sociology of education
(d) The educational inheritance and the organisation of education in selected countries. (At present the selected countries are India and Pakistan.)

Candidates shall also attend and will be examined in such of the following courses as may be prescribed by the head of the department of education, these courses being normally covered in two terms:

(e) The teaching of English as a foreign language
(f) History of the educational system of England and Wales
(g) Methods of teaching a selected school subject
(h) Education and society
(i) Comparative education
(j) History and theory of science

Candidates are required to submit by 1 May an essay of approximately 12,000 words on a topic approved by the head of the department. The topic must normally be approved before the end of the first term. This essay will be regarded as part of the written examination.

The list of successful candidates will be published in two divisions. The names in each will be placed in alphabetical order.

In exceptional circumstances, upon recommendation by the head of the department, and by permission of the Board of the Faculties of Arts, Economic and Social Studies and Law, candidates may extend their studies and may become candidates for the degree of Master of Education.

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Regulations for diplomas in primary and secondary education, the education of backward children, physical education and religious education will be found in the *Handbook* of the University of Leeds Institute of Education available from the Secretary, The Institute of Education, The University, Leeds 2.

## POSTGRADUATE DIPLOMA IN HEALTH SERVICES ADMINISTRATION

This diploma course is intended to form part of a training for entrants into hospital and health services administration. In addition to the course a period of observation of the operation and administration of the National Health Service may be prescribed at the discretion of the University. The length and nature of this period would be determined in the light of the candidate's previous experience.

Any candidate entering upon the course must have graduated at an approved university, or hold qualifications and have gained administrative or professional experience sufficient to satisfy the Senate that he is a suitable person to enter upon the course.

The course for the diploma will extend over one session. A candidate will be required:

1. To attend approved courses.
2. To carry out, under supervision, any prescribed field work, and to submit written reports on it.
3. To satisfy the examiners by completing any periodic written assignments and tests that may be set, and by passing a written examination.

The examination will consist of five papers:

(a) British public and social administration
(b) Management economics
(c) Statistical method—including medical statistics
(d) Social medicine
(e) Law—with special reference to the National Health Service

and a sixth paper which will be an essay paper on any aspect of the syllabus.

A candidate may apply to be exempted from parts of the syllabus, where he can show that he has previously successfully completed a course of study of a major part of one of the subjects listed in 3(a)—3(e) above, at a standard acceptable to the Board of the Faculty. In place of this he will be required to submit for examination a dissertation on an approved or prescribed subject.

A diploma may be awarded with distinction to a candidate whose work is judged to be of outstanding merit.

# COURSES IN THE FACULTY OF ARTS

The following pages give information concerning courses in subjects in the Faculty. The information is arranged in the traditional order of subjects and an indication is given of the degrees or other qualifications for which the courses are normally attended. Enquiries should be addressed to the sub-dean of the Faculties of Arts, Economic and Social Studies and Law, to the tutor of women students or to the head of the appropriate department.

The name of each course is given first, then the year of the student's career in which the course is normally attended followed by the days on which and, where sufficiently firmly established, the hours at which lectures are normally given. There is a brief indication of the content of the course and, finally, where appropriate, particulars of the examination set on the subject matter. The scope of many examinations is, however, often wider than that of any one course.

## GREEK

*For the degree of Bachelor of Arts in general studies*

GREEK; ONE-YEAR COURSE [1

First year; 4 hours a week at times to be arranged.
Prescribed books; unprepared translation; prose composition.
Examination: 2 papers of 3 hours each.

GREEK; TWO-YEAR COURSE [2

Second and 3rd years; 4 hours a week at times to be arranged.
Prescribed books; unprepared translation; prose composition.
Examination: 3 papers of 3 hours each.

*For the degree of Bachelor of Arts in special studies**

PROSE COMPOSITION [3

First, 2nd and 3rd years; 1st year, 1 hour a week at times to be arranged; 2nd and 3rd years, tutorially.
Examination: 1 paper each year.

UNSEEN TRANSLATION [4

First, 2nd and 3rd years; 1st year, 1 hour a week at times to be arranged; 2nd and third years, tutorially.
Examination: 1 paper each year.

THE GREEK TRADITION [5

First year (half); 2 hours a week at times to be arranged.
An introduction to the history of Greek scholarship.

*Owing to pressure of numbers, courses 5 to 12 prescribed for the 1st and 2nd years will be given only once in each two-year period.

SELECTIONS FROM THE ORATORS [6

First year (half); 2 hours a week at times to be arranged.
Study of prescribed texts with special attention to Demosthenes, *De Corona*.

THE EPIC [7

First year (half); 2 hours a week at times to be arranged.
Study of prescribed texts with special attention to selected books of the *Iliad*.

DRAMA 1 [8

First year (half); 2 hours a week at times to be arranged.
Study of one play each of Sophocles and Euripides with special attention to the first.

LYRIC AND ELEGIAC POETRY [9

Second year (half); 2 hours a week at times to be arranged.
Study of selected passages from the *Oxford Book of Greek Verse*.

THE HISTORIANS [10

Second year (half); 2 hours a week at times to be arranged.
Study of prescribed books with special attention to one book of Thucydides.

DRAMA 2 [11

Second year (half); 2 hours a week at times to be arranged.
Study of one play each of Aeschylus and Aristophanes with special attention to the second.

THE PHILOSOPHERS 1 [12

Second year (half); 2 hours a week at times to be arranged.
Study of Xenophon, *Memorabilia*, Books 1 to 3 and a dialogue of Plato with special attention to the latter.

THE PHILOSOPHERS 2 [13

Third year (half); 2 hours a week at times to be arranged.
Study of Plato, *Republic*.

ALEXANDRINE POETRY [14

Third year (half); 2 hours a week at times to be arranged.
Study of prescribed passages from Apollonius Rhodius, Callimachus and Theocritus with special attention to the third.

PINDAR [15

Third year (half); 2 hours a week at times to be arranged.
Study of prescribed selections from the *Odes* of Pindar.

LITERARY CRITICISM [16

Third year (half); 2 hours a week at times to be arranged.
Study of Aristotle, *Poetics*.

Courses in Greek history will be given in the department of Greek; for details see under History, p. 417

## LATIN

*For the degree of Bachelor of Arts in general studies*

LATIN; ONE-YEAR COURSE

First year; Monday and Friday, 10 to 11; either Tuesday, 11 to 12 and Wednesday, 10 to 11, or Thursday, 10 to 11 and Friday, 3 to 4.
Prescribed books; unprepared translation; prose composition.
Examination: 2 papers of 3 hours each and 1 paper of 2 hours.

LATIN; TWO-YEAR COURSE

Second and 3rd years; 2nd year, Monday, Tuesday, Wednesday, Friday, 12 to 1; 3rd year, Tuesday, Wednesday, 12 to 1; Monday, Friday, 3 to 4.
Prescribed books, unseen translation, prose composition, outlines of Latin literature, general paper.
Examination: 3 papers of 3 hours each and 1 paper of 2 hours.

*For the degree of Bachelor of Arts in special studies*

CLASSICS
LATIN WITH GREEK } FIRST-YEAR COURSE
LATIN

First year; at times to be arranged.
Prescribed books, unseen translation, prose composition, Roman life and manners.

CLASSICS; SECOND-YEAR COURSE

Second year; Monday, Friday, 12 to 1 and at times to be arranged.
Prescribed books, unseen translation, prose composition, development of the Latin language, special subject if Latin.

LATIN WITH GREEK; SECOND-YEAR COURSE

Second year; Monday and Friday, 12 to 1 and at times to be arranged.
Prescribed books, unseen translation, prose composition, development of the Latin language, special subject if Latin, additional prescribed books.

LATIN; SECOND-YEAR COURSE

Second year; Monday, Friday, 12 to 1 and at times to be arranged.
Prescribed books, unseen translation, prose composition, special subject, additional prescribed books, development of the Latin language.

CLASSICS; THIRD-YEAR COURSE

Third year; Monday, Friday, 12 to 1 and at times to be arranged.
Prescribed books, unseen translation, prose composition, special subject if Latin, Roman history if chosen.
Examination: 5 papers, or 7 papers if Latin special subject and Roman history are taken.

LATIN WITH GREEK; THIRD-YEAR COURSE

Third year; Monday, Friday, 12 to 1 and at times to be arranged.
Prescribed books, unseen translation, prose composition, additional prescribed books, special subject if Latin, Roman history if chosen.
Examination: 6 papers, or 8 papers if Latin special subject and Roman history are taken.

LATIN; THIRD-YEAR COURSE

Third year; Monday, Friday, 12 to 1 and at times to be arranged.
Prescribed books, unseen translation, prose composition, additional prescribed books, special subject, Roman history.
Examination: 9 papers.

## SEMITIC LANGUAGES AND LITERATURES

*For the degree of Bachelor of Arts in general studies*

HEBREW; ONE-YEAR COURSE

First year; 3 hours a week and one tutorial at times to be arranged.
Biblical Hebrew only (the grammar of biblical Hebrew and prescribed texts of the Hebrew Bible); Israelite history and archæology.
Examination: 2 papers.

ARABIC; ONE-YEAR COURSE

First year; 4 hours a week at times to be arranged.
Elementary Arabic grammar, prescribed texts from Arabic literature, Arabic history and institutions.
Examination: 2 papers.

HEBREW; TWO-YEAR COURSE

Second and 3rd years; 4 hours a week at times to be arranged.
Hebrew texts from the Bible, Mishnah and Apocrypha, or medieval and modern literature; Israelite and Jewish history, archæology and religion.
Examination: 4 papers.

ARABIC; TWO-YEAR COURSE

Second and 3rd years; 5 hours a week at times to be arranged.
Quranic texts; selections of poetry; Hadith literature; Annals; Quranic commentary and Arabic linguistics, history, institutions and religion.
Examination: 4 papers and an oral examination.

*For the degree of Bachelor of Arts in special studies*

SPECIAL STUDIES IN SEMITIC LANGUAGES AND LITERATURES

First, 2nd and 3rd years; at times to be arranged.
Biblical, apocryphal, rabbinic, medieval and modern Hebrew; either biblical, non-biblical and targumic Aramaic, and Syriac language and literature and/or Arabic language and literature, history and institutions, ancient and modern

classical; comparative Semitic philology. Optional advanced Syriac, or advanced Arabic, or advanced medieval Hebrew, or Greek and papyri, or advanced comparative Semitic philology and epigraphy, or Palestinian archæology in the 3rd year.

*For the diploma in Hebrew*

HEBREW DIPLOMA COURSE

First and 2nd years; 5 hours a week at times to be arranged.
Biblical and post-biblical Hebrew; Israelite and Jewish history; Hebrew conversation.
Examination: 2 papers each year.

*For the certificate in the teaching of Hebrew*

HEBREW TEACHING CERTIFICATE COURSE

Usually after taking the diploma in Hebrew; at times to be arranged.
Biblical and post-biblical Hebrew; history of Jewish education; theory of education (in the department of education), and teaching practice.

*For the certificate in Arabic*

ARABIC CERTIFICATE COURSE

First and 2nd years; 5 hours a week at times to be arranged.
Classical and modern Arabic, Arab history and institutions; Arabic conversation.
Examination: 2 papers each year.

NON-QUALIFYING HEBREW AND ARABIC

Weekly lunch-hour courses in Hebrew and Arabic at varying levels on days to be arranged, open to students of all Faculties.

## ENGLISH LITERATURE

*For the degree of Bachelor of Arts in general studies*

ENGLISH G1 A; ONE-YEAR COURSE

First year; Wednesday, 11 to 12 and a fortnightly tutorial class at times to be arranged.
Contemporary literature.
Examination: 1 paper.

ENGLISH G 2 A AND G 3 A; TWO-YEAR COURSE

Second and 3rd years; 2 hours a week and 1 hour tutorial class at times to be arranged.
Second year: Chaucer, the age of Shakespeare and the 17th century.
Third year: 1700 to 1960.
Examination: 3 papers.

*For the degree of Bachelor of Arts in special studies*

ENGLISH S 1 A

First year; Wednesday and Friday, 11 to 12 and a weekly tutorial class at times to be arranged.
Selected texts in poetry, drama and prose.
Examination: 1 paper.

ENGLISH S 1 (Schemes A, C and D, see pages 344 and fol.)
Second or 3rd year; Tuesday, 12 to 1.
English poetry from Skelton to the present day.
Examination: 1 paper.

ENGLISH S 2 (schemes A, C and D)
Second and 3rd years; Tuesday, 11 to 12.
The development of the novel with selected texts.
Examination: 1 paper.

ENGLISH S 3 (schemes A and C)
Third year; Monday, 12 to 1.
The drama.
Examination: 1 paper.

ENGLISH S 4 (schemes A and C)
Second year; Thursday, 2 to 3.
A special period of literature. The period for 1964-5 will be 1700–1730.
Examination: 1 paper.

ENGLISH S 5 (schemes A, B and C)
Third year; Wednesday, 11 to 12.
Shakespeare.
Examination: 1 paper.

ENGLISH S 6 (schemes A and C)
Second and 3rd years; Friday, 11 to 12.
Literary criticism.
Examination: 1 paper.

ENGLISH S 7 (schemes A, B and C)
Second and 3rd years; at times to be arranged.
Tutorial classes on matter in the various courses of lectures.

ENGLISH S 8 (schemes A and C)
Third year; at times to be arranged.
Study of a special author. The author chosen for 1964-5 will be Cowper.

ENGLISH S 9 (scheme C)
Third year; at times to be arranged.
American literature.
Examination: 1 paper.

ENGLISH S 10 (scheme C)
Second year; Thursday, 11 to 12.
A study of Milton and his time.
Examination: 1 paper.

ENGLISH S 11 (scheme C)
Second year; Monday, 11 to 12.
A series of lectures on general literary subjects.

ENGLISH S 12 (schemes A, C and D)
Second year; Tuesday, 12 to 1.
The development of prose style.
Examination: 1 paper.

ENGLISH S 13 (scheme C)
Second year; Tuesday or Friday, 4 to 5.
Practical drama.

## ENGLISH LANGUAGE AND MEDIEVAL LITERATURE

*For the degree of Bachelor of Arts in general studies*

ENGLISH G 1B; ONE-YEAR COURSE
First year; Monday and alternate Fridays, 11 to 12.
Old English literature.
Examination: 1 paper.

ENGLISH G 2 B AND G 3 B; TWO-YEAR COURSE
Second year; Monday, 3 to 4, Tuesday and Thursday, 10 to 11; 3rd year, Monday and Tuesday, 11 to 12, Wednesday, 10 to 11.
Middle English literature and grammar, history of English, structure and phonetics of modern English, English prose style.
Examination: 3 papers.

*For the degree of Bachelor of Arts in special studies*

ENGLISH S 1 B
First year; Monday and Friday, 3 to 4, Thursday, 11 to 12.
An elementary study of English phonetics, and of the language, literature and history of the Old English period.
Examination: 1 paper.

ENGLISH S 16 (scheme A, see pages 344 and fol.)
Second and 3rd years; 1 hour a week at a time to be arranged.
History of the language.
Examination: 1 paper.

ENGLISH S 17 (scheme B)
Second year; Monday and Wednesday, 11 to 12; 3rd year, Wednesday and Thursday, 10 to 11.
English philology.
Examination: 1 paper.

ENGLISH S 18 (schemes A and B)
Second year; Thursday, 10 to 11; 3rd year, Monday, 10 to 11.
Old English texts and literature with special study of *Beowulf*.
Examination: 1 paper.

ENGLISH S 19 (schemes A and B)
Second year; Monday, 10 to 11.
Middle English texts with special study of Dickins and Wilson, *Early Middle English Texts* and Sisam, *Fourteenth Century Verse and Prose*.

ENGLISH S 20 (schemes A and B)
Third year; Tuesday 9 to 10, Thursday, 3 to 4.
Middle English texts with special study of *Sir Gawain and the Green Knight* and other texts to be prescribed.
Examination: 1 paper.

ENGLISH S 21 (schemes A and B)
Middle English literature excluding Chaucer.
This course will be given in alternate years. It will be given in 1965-6.
Examination: 1 paper.

ENGLISH S 22 (scheme B)
Second year; Tuesday, 2 to 3.
Middle English.

ENGLISH S 23 (scheme C)
Second and third years; Wednesday, 11 to 12.
Middle English texts and literature with special study of Sisam, *Fourteenth Century Verse and Prose*.
This course will be given in alternate years. It will be given in 1965-6.
Examination: 1 paper.

ENGLISH S 24 (schemes A, B and C)
Second and 3rd years; Wednesday, 11 to 12.
Chaucer.
This course is given in alternate years. It will next be given in the session 1964-5.
Examination: 1 paper.

ENGLISH S 25 (scheme B)
Second and 3rd years; 1 hour a week at times to be arranged.
Gothic and Germanic philology.
Examination: 1 paper.

ENGLISH S 26 (scheme B)
Second year; Tuesday and Thursday, 9 to 10; 3rd year, Tuesday and Thursday, 2 to 3.
Old Icelandic.
Examination: 1 paper.

ENGLISH S 27 (scheme B)
Second year, 2 hours a week at times to be arranged; 3rd year, 1 hour a week at times to be arranged.
Modern Icelandic.
Examination: 1 paper.

ENGLISH S 28 (scheme B)
Second and 3rd years; 1 hour a week at times to be arranged.
English dialectology.
Examination by thesis.

ENGLISH S 29 (scheme B)
Second year, 3 hours a week at times to be arranged; 3rd year, 1 hour a week at times to be arranged.
General and English phonetics.
Examination: 1 paper.

ENGLISH S 30 (scheme B)
Second year, Tuesday, 10 to 11; 3rd year, Tuesday, 3 to 4.
Anglo-Saxon art and archæology.
Examination: 1 paper.

ENGLISH S 31 (scheme B)
Second and 3rd years; 2 hours a week at times to be arranged.
Medieval Welsh.
Examination: 1 paper.

ENGLISH S 32 (scheme B)
Second and 3rd years; 1 hour a week at times to be arranged.
English palæography and bibliography.
Examination: 1 paper.

ENGLISH S 33 (scheme B)
Second and 3rd years; at times to be arranged.
Old Saxon and Old High German.
Examination: 1 paper.

ENGLISH S 34 (scheme B)
Second and 3rd years; at times to be arranged.
Old French.
Examination: 1 paper.

ENGLISH S 35 (Scheme B)
Second and 3rd years; 2 hours a week at times to be arranged.
The structure of present-day English.
Examination: 1 paper.

ENGLISH S 36 (scheme B)
Second and 3rd years; 2 hours a week at times to be arranged.
Comparative philology.
Examination: 1 paper.

ENGLISH S 37 (Scheme B)
Second and 3rd years; 2 hours a week at times to be arranged.
Linguistics.
Examination: 1 paper.

ENGLISH S 38 (schemes A and B)
Second and 3rd years; 1st terms only, 1 hour a week at times to be arranged.
Essays and discussions; 2nd year, Old English literature; 3rd year, Middle English literature.

## ICELANDIC

*For the degree of Bachelor of Arts in general studies*

ICELANDIC; ONE-YEAR COURSE

First year; 3 hours a week at times to be arranged.
An introduction to modern Icelandic; grammar, prose composition; conversation; modern conditions and institutions.
Examination: 2 papers and an oral examination.

ICELANDIC; TWO-YEAR COURSE

Second year; 3 hours a week at times to be arranged.
Prescribed modern Icelandic texts; prose composition; conversation; institutions of the 19th and 20th centuries. Introduction to Old Icelandic; grammar; prescribed texts; history and institutions.
Examination: 3 papers and an oral examination.

## PHONETICS

*For the degree of Bachelor of Arts in general studies*

PHONETICS; ONE-YEAR COURSE [1

First year; Monday 3 to 4, 4 to 5; Tuesday 4 to 5; and one hour a week practical work at times to be arranged.
Etic studies: an introduction to speech sounds and their classification.
Ear training and practical performance: the recognition and articulation of speech sounds.
Emic studies: an introduction to phonological structure, with special reference to various forms of English.
Instrumental phonetics: introductory course.
Examination: 2 papers and an oral examination.

PHONETICS: TWO-YEAR COURSE [2

Second year; 4 hours a week at times to be arranged.
Third year; 4 hours a week at times to be arranged, plus attendance at the staff seminar as prescribed.
Etic studies: segments, utterances, and their phonetic features.
Ear training and practical performance, including work with native speakers on their own language.

Emic studies: the nature of linguistic models; phonemic, prosodic, distinctive feature and other phonological analyses. Synchronic and diachronic phonology, and the mechanisms of change.
Acoustic and instrumental phonetics, with practical laboratory work.
A special study of the phonology and phonetics of English, one European language, and one non-European language.

Examination: Second year—2 papers and an oral examination
Third year—4 papers and an oral examination.

*For the degree of Bachelor of Arts in special studies in English, scheme B*

PHONETICS [3

Second year; Monday 3 to 4, Tuesday 4 to 5 and private listening period.
General and English phonetics—theory and ear training as for phonetics general studies one-year course.
Third year; 1 hour a week at times to be arranged, plus tutorials
2 hours a week at times to be arranged.

Examination: 1 paper and an oral examination.

*For the degree of Bachelor of Arts in special studies in English, scheme D*

PHONETICS [4

Second year; Monday 3 to 4, 4 to 5, Tuesday 4 to 5 and private listening period.
General and English phonetics—theory and ear training as for phonetics general studies one-year course.
Third year; 1 hour a week at times to be arranged, plus tutorials.

Examination: Half of 1 paper (1½ hours) and an oral examination.

*For the degree of Bachelor of Arts in general and special studies*

THE PHONETICS OF GERMAN [5

First or 2nd years; Thursday, 2 to 3; and private listening period.
Elementary phonetic theory; the phonetic structure of German; demonstration of German sounds; ear training; study of recordings of spoken German; phonetic transcription and dictation. Optional practical classes (2nd and 3rd terms) for instruction in German pronunciation, with criticism of student's own recordings of spoken German.

Examination: Half of 1 paper (1½ hours) and an oral examination.

THE PHONETICS OF ITALIAN [6

First year special and second year general; one hour a week at times to be arranged, and private listening period.
Elementary phonetic theory; demonstration of Italian sounds; ear training; practical instruction in the pronunciation of Italian; study of recordings of spoken Italian.

Examination: One paper (1½ hours) and an oral examination.

THE PHONETICS OF RUSSIAN [7

First year; Monday, 10 to 11 or Thursday, 11 to 12, practical groups at times to be arranged and private listening period.

Elementary phonetic theory; demonstration of Russian sounds; ear training; practical instruction in the pronunciation of Russian; study of recordings of spoken Russian.

Examination: One paper (1½ hours) and an oral examination.

THE PHONETICS OF FRENCH 1 [8

First year (special studies) or 2nd year (general studies and subsidiary); first half of session, Wednesday 9 to 10; second half of session, one hour a fortnight practical classes, alternating with one hour a fortnight practical groups, at times to be arranged; and private listening period.

The mechanism of utterance, classification of speech sounds, elementary phonetic theory, the phonetic structure of French, demonstration of French sounds; practical instruction in the pronunciation of French, study of recordings, criticism of the student's own pronunciation; phonetic transcription and dictation, ear training.

Examination: 1 paper (1½ hours) and an oral examination.

THE PHONETICS OF FRENCH 2 [9

Second year; Tuesday 4 to 5 (term 1), and optional practical classes (term 2), and private listening period.

Phonetic features of connected speech including intonation.

Examination: A departmental written test and a practical examination.

THE PHONETICS OF FRENCH 3 [10

(Special Subject Option)

Third year; Wednesday 11 to 12.

Introduction to linguistic analysis; advanced phonetics of modern French; comparison of the phonetic structure of English and French; the mechanism of sound changes in modern French; detailed work on the student's own French.

Examination: One paper (2 hours) and an oral examination.

THE PHONETICS OF SPANISH [11

First year; Tuesday, 11 to 12, and private listening period.

Elementary phonetic theory; practical instruction in the pronunciation of Spanish; study of recordings of spoken Spanish.

Examination: 1 paper (1½ hours) and an oral examination.

*Postgraduate diploma in English studies*

THE PHONETICS OF ENGLISH [12

Monday 11 to 12, and one hour practical work, and private listening period at times to be arranged.

The mechanism of utterance; general elementary phonetic theory; the classification and description of speech sounds and prosodic features; phonetic transcription.

Practical work; ear training, phonetic dictation, and the study of recordings of spoken English including the student's own speech.
Examination: One paper (3 hours), and an oral examination.

*Postgraduate diploma in English as a second language*

PHONETICS [13

Three hours a week at times to be arranged, and private listening period.
General phonetic theory, the phonetic and tonal structure of English, surveys of phonic substance of other languages, foreigners' difficulties, ear training and practical work.
Examination: One paper (Category 1—1½ hours, Category 2—3 hours) and an oral examination.

## FRENCH

*For the degree of Bachelor of Arts in general studies*

FRENCH GENERAL STUDIES FIRST YEAR [1

First year; Friday, 12 to 1 and one of the following: Tuesday, 10 to 11 *or* 2 to 3 *or* 3 to 4 *or* Wednesday, 10 to 11 *or* Thursday, 3 to 4; and one of the following: Wednesday, 9 to 10 *or* 12 to 1 *or* Thursday, 10 to 11 *or* 2 to 3 *or* Friday, 10 to 11 *or* 3 to 4.
Prose [translation into French]; translation into English; literature.
Examination: 2 papers and an oral examination.

FRENCH GENERAL STUDIES SECOND YEAR [2

Second year; Monday, 10 to 11, Tuesday, 9 to 10, 3 to 4 and 4 to 5, Friday, 9 to 10 *or* 2 to 3.
Prose [translation into French]; essay in French; phonetics; literature; institutions.
Examination: 2 papers.

FRENCH GENERAL STUDIES THIRD YEAR [3

Third year; Monday, 9 to 10, Monday, Tuesday and Friday, 2 to 3, Tuesday, 3 to 4.
Prose [translation into French]; essay in French; translation into English; literature; institutions.
Examination: 4 papers and an oral examination.

Course 1 is the one-year course; courses 2 and 3, the two-year course.

Candidates who offer French as a three-year subject for a degree in general studies will normally be required to spend a period of at least one month in France or in some other French-speaking country during the long vacation of their first or second year, this period to include attendance at an approved course of study.

*For the degree of Bachelor of Arts in special studies*

FRENCH SPECIAL STUDIES FIRST YEAR [4

First year; at times to be arranged.
French language and literature (translation into French; translation into English and *explication*); phonetics and Old French; general linguistics and Romance philology; history of the French language; a period or periods of French literature and thought; French history and institutions.
Examination: 6 papers and an oral examination.

FRENCH SPECIAL STUDIES SECOND YEAR [5

Second year; at times to be arranged.

Translation into French; translation into English; *explication de textes;* history of the French language; Old French; stylistics; French history and institutions; phonetics; 3 special subjects: I (*a*) 17th-century literature, (*b*) 18th-century novel, (*c*) 18th-century drama, (*d*) semantics. II (*a*) 16th-century poetry. (*b*) 18th-century thought, (*c*) 20th-century drama.

Examination: 2 papers.

FRENCH SPECIAL STUDIES THIRD YEAR [6

Third year; at times to be arranged.

Translation into French; translation into English; *explication de textes;* history of the French language (syntax); Old French; French history and institutions; 3 special subjects: (*a*) 16th-century prose, (*b*) 17th-century literature, (*c*) 19th-century novel, (*d*) 19th-century poetry, (*e*) 20th-century literature, (*f*) 20th-century novel, (*g*) 20th-century thought, (*h*) Provençal, (*i*) Romance philology, (*j*) contemporary French history and institutions, (*k*) phonetics.

Examination: 11 papers and an oral examination.

*French as a Subsidiary Subject*

The attention of candidates who offer French as a three-year subject for a degree in special studies is drawn to the regulations regarding the course and the examination in the second and third years. See p. 352.

## SPANISH AND PORTUGUESE

*For the degree of Bachelor of Arts in general studies*

SPANISH; ONE-YEAR COURSE [1

First year; *either* (Group A) Monday, 12 to 1; Wednesday, 12 to 1; Thursday, 4 to 5; Friday, 2 to 3; *or* (Group B) Tuesday, 2 to 3 and 4 to 5; Wednesday, 12 to 1; Thursday, 4 to 5.

Examination: 2 papers and an oral examination.

SPANISH; TWO-YEAR COURSE [2

Second year; Monday and Wednesday, 9 to 10; and *either* Monday, 4 to 5 *or* Wednesday, 10 to 11; 3rd year, Wednesday, 10 to 11, Thursday, 10 to 11 and 11 to 12.

Grammar and translation; literature and prescribed books.

Examination: 2 papers at the end of the 2nd year; 4 papers and an oral examination at the end of the 3rd year.

SPANISH 3 X [3

Third year; at times to be arranged.

Courses in language and literature.

Examination: 4 papers and an oral examination.

The course is intended for candidates who take course number 2 in their 1st and 2nd years.

Candidates who offer Spanish as a three-year subject for a degree in general studies will normally be required to spend a period of at least one month in Spain during the long vacation of their first or second year, this period to include attendance at an approved course of study.

PORTUGUESE; ONE-YEAR COURSE [4

First year; 4 hours a week at times to be arranged.
Grammar and translation; reading of and commentary on prescribed books; geography and history of Portugal.
Examination: 2 papers and an oral examination.

PORTUGUESE; TWO-YEAR COURSE [5

Second and 3rd years; 4 hours a week at times to be arranged.
Grammar and translation; literature and prescribed books chosen alternately from the classical or modern period. Brazilian texts may be studied.
Examination: 2 papers at the end of the 2nd year; 4 papers and an oral examination at the end of the 3rd year.

PORTUGUESE 3X [6

Third year; 4 hours a week at times to be arranged.
Advanced modern language study with special periods of literature or prescribed texts.
Examination: 4 papers and an oral examination.
The course is intended for candidates who take course number 5 in their 1st and 2nd years.

*For the degree of Bachelor of Arts in special studies*

SPANISH S 1 [7

First year; Monday, 9 to 10; Tuesday, 10 to 11 *or* Thursday, 3 to 4; Tuesday, 11 to 12 and 12 to 1; Wednesday, 9 to 10; Friday, 3 to 4.
Translation, modern literature, philology, phonetics, civilisation and geography of Spain.
Examination: 5 papers and an oral examination.

SPANISH S 2 [8

Second year; at times to be arranged.
Translation; Spanish-American and Golden Age literature; civilisation.
Examination: 2 papers.

SPANISH S 3 [9

Third year; at times to be arranged.
Translation; Spain in the New World; Valle-Inclán; medieval literature; and various optional courses.
Examination: 9 papers and an oral examination.

*Spanish as a Subsidiary Subject*

The attention of candidates who offer Spanish as a three-year subject for a degree in special studies is drawn to the regulation regarding the examination in the second year. See p. 354.

*For the diploma in Spanish*

SPANISH D 1 [10

First year; not less than 2 hours a week at times to be arranged.
Grammar, translation and composition; Spanish history and civilisation from 1500 to 1700 or from 1800 to 1960; four prescribed literary texts.
Examination: 2 papers and an oral examination.

SPANISH D 2 [11

Second year; not less than 2 hours a week, at times to be arranged.
Grammar, translation and composition; phonetics; Spanish literature from 1500 to 1700 or from 1800 to 1960; eight prescribed texts.
Examination: 3 papers and an oral examination.

## ITALIAN

*For the degree of Bachelor of Arts*

ITALIAN; ONE-YEAR COURSE

First year; 4 hours a week at times to be arranged.
Grammar; composition; Italian literature and drama; prescribed texts; Italian civilisation.
Examination: 2 papers and an oral examination.

ITALIAN; TWO-YEAR COURSE

Second and 3rd years; 4 hours a week at times to be arranged.
Composition; Italian literature and drama to 1400 and *either* from 1748 to 1837 *or* from 1450 to 1595; prescribed texts from these periods; Italian civilisation; a special subject approved by the head of the department.
Examination: 4 papers and an oral examination.

[The period for examination in June, 1965, will be 1450-1595.]

Candidates who offer Italian as a three-year subject for a degree in general studies will normally be required to spend a period of at least one month in Italy or in some other Italian-speaking country during the long vacation of their first or second year, this period to include attendance at an approved course of study.

*For the degree of Bachelor of Arts in textile design, textile management and music*

ITALIAN; TWO-YEAR COURSE

First and 2nd years; 4 hours a week at times to be arranged.
1st year; grammar; composition; Italian literature and drama; prescribed texts; Italian civilisation. 2nd year; composition; Italian literature and drama

to 1400 *or* 1450–1595 *or* 1748–1837; prescribed texts from the period chosen; Italian civilisation; a special subject approved by the head of the department.
Examination: 1st year, 2 papers and an oral examination; 2nd year, 2 papers and an oral examination.

*For the degree of Bachelor of Arts in special studies*

ITALIAN S 1

First year; 6 hours a week at times to be arranged.
Composition; conversation; history of the language; history of literature; drama; prescribed texts; Italian civilisation.
Examination: 5 papers and an oral examination.

ITALIAN S 2

Second year; 8 hours a week at times to be arranged.
As for Italian S 1 and special subject.

ITALIAN S 3

Third year; 8 hours a week at times to be arranged.
As for Italian S 1 and special subject.
Examination: 8 papers, an oral examination and the presentation of a dissertation.

## GERMAN

*For the degree of Bachelor of Arts in general studies*

GERMAN; ONE-YEAR COURSE

First year; Monday, 11 to 12 *or* Wednesday, 10 to 11; Tuesday, 11 to 12, 3 to 4; Friday, 2 to 3.
Prescribed texts; syntax and composition; German conversation.
Examination: 2 papers and an oral examination.

GERMAN; TWO-YEAR COURSE

Second and 3rd years; Monday and Wednesday, 12 to 1, Thursday, 2 to 3 (2nd year only), Monday, 4 to 5 (3rd year only), Friday, 12 to 1 (2nd year only). Conversation groups by arrangement (3rd year only).
Composition; phonetics; periods of literature; prescribed texts; German conversation.
Examination: 4 papers, a practical test in phonetics and an oral examination.

Candidates who offer German as a three-year subject for a degree in general studies will normally be required to spend a period of at least one month in Germany or some other German-speaking country during the long vacation of their first or second year, this period to include attendance at an approved course of study.

*For the degree of Bachelor of Arts in special studies*

GERMAN SPECIAL STUDIES FIRST YEAR

First year; Monday, 12 to 1, Tuesday, 11 to 12, Thursday, 2 to 3, 4 to 5, Friday, 9 to 10. Conversation groups by arrangement.

Composition; essays; conversation; phonetics; medieval and modern prescribed texts; periods of literature; German life and thought.

Examination: 4 papers and an oral examination.

GERMAN SPECIAL STUDIES SECOND AND THIRD YEARS (scheme A)

Second and 3rd years; Monday, 4 to 5 (3rd year); Tuesday, 10 to 11, 12 to 1, 4 to 5; Wednesday, 11 to 12 (2nd year), 12 to 1 (3rd year); Thursday 12 to 1; Friday, 12 to 1, 3 to 4. Times to be arranged: conversation and essay groups, and, in third year, special subjects.

Composition; essays; conversation; medieval and modern texts; periods of literature; German life and thought; special emphasis on German literature.

Examination: 9 papers, or 8 papers and an extended essay, and an oral examination.

GERMAN SPECIAL STUDIES SECOND AND THIRD YEARS (scheme B)

Second and 3rd years; Monday, 11 to 12, 3 to 4; Tuesday, 9 to 10 (3rd year), 10 to 11, 4 to 5 (2nd year); Wednesday, 11 to 12 (2nd year), 12 to 1 (3rd year); Thursday, 12 to 1; Friday, 12 to 1 (3rd year), 3 to 4 (2nd year). Conversation and essay groups and one other hour a week by arrangement.

Composition; essays; conversation; history of the German language; medieval and modern texts; periods of literature; German life and thought; special emphasis on German and Germanic philology and medieval literature.

Examination: 9 papers and an oral examination.

MODERN LANGUAGES AND LITERATURES FIRST YEAR (GERMAN)

Times, content and examination as for German special studies first year.

MODERN LANGUAGES AND LITERATURES SECOND AND THIRD YEARS (GERMAN, scheme A)

Second and 3rd years; Tuesday, 10 to 11, 12 to 1; Wednesday, 11 to 12 (2nd year), 12 to 1 (3rd year); Thursday, 12 to 1; Friday, 12 to 1, 3 to 4. Conversation and essay groups by arrangement.

As for German special studies second and third years (scheme A).

Examination: 6 papers and an oral examination.

MODERN LANGUAGES AND LITERATURES SECOND AND THIRD YEARS (GERMAN, scheme B)

Second and 3rd years; Monday, 11 to 12 (3rd year); Tuesday, 9 to 10 (3rd year), 10 to 11, 12 to 1 (2nd year); Wednesday, 11 to 12 (2nd year), 12 to 1 (3rd year); Thursday, 12 to 1; Friday, 12 to 1, 3 to 4 (2nd year). Conversation; essay groups by arrangement.

As for German special studies second and third years (scheme B).

Examination: 6 papers and an oral examination.

*German as a Subsidiary Subject*

The attention of candidates who offer German as a three-year subsidiary subject for a degree in special studies is drawn to the regulations regarding the course and the examination in the second and third years. See p. 359.

*Other courses*

ELEMENTARY GERMAN FOR ARTS STUDENTS

Any year; 2 hours a week at times to be arranged.
Outlines of German grammar; prescribed texts. The course is intended for Arts students who wish to acquire a reading knowledge of German.

ELEMENTARY GERMAN FOR SCIENCE STUDENTS

See courses in the Faculty of Science, p. 550.

## RUSSIAN

*For the degree of Bachelor of Arts in general studies*

RUSSIAN; ONE-YEAR COURSE

First year; 4 hours a week at times to be arranged.
Grammar, reading and translation.
Examination: 1 paper and an oral examination.

RUSSIAN; TWO-YEAR COURSE

Second and 3rd years; 4 hours a week at times to be arranged.
Language, prescribed texts, outlines of Russian history and literature.
Examination: 3 papers and an oral examination.

*For the degree of Bachelor of Arts in special studies*

RUSSIAN SPECIAL STUDIES 1

First year; at times to be arranged.
Language, outlines of history.
Examination: 2 papers and an oral examination.

RUSSIAN SPECIAL STUDIES 2

First or 2nd years; at times to be arranged.
Russian language, prescribed literary texts, Russian literature and history.
Examination: 3 papers and an oral examination.

RUSSIAN SPECIAL STUDIES 3

Second or 3rd years; at times to be arranged.
Russian language, prescribed literary texts, Russian literature and history, history of the Russian language, special subjects.

RUSSIAN SPECIAL STUDIES 4

Third or 4th years; at times to be arranged.
Russian language, prescribed literary texts, Russian literature and history, history of the Russian language, special subjects.
Examination: 9 papers and an oral examination.

MODERN LANGUAGES AND LITERATURES (RUSSIAN)

First, 2nd, 3rd and 4th years; at times to be arranged.
As for special courses 1, 2, 3 and 4.
Examination: 6 papers and an oral examination.

*For the degree of Bachelor of Science in special studies*

For details of RUSSIAN FOR SCIENCE STUDENTS INTRODUCTORY AND GENERAL (S) COURSE, see courses in the Faculty of Science, p. 550.

*For the certificate in Russian*

RUSSIAN CERTIFICATE COURSE

First and 2nd years; at times to be arranged.
Russian grammar, reading and translation.
Examination: 2 papers of 3 hours each.

## HISTORY

*For the degree of Bachelor of Arts in general studies*

HISTORY; ONE-YEAR COURSE

Examination: 2 papers, selected with the approval of the chairman of the school of history from:

1. The ancient world
2. Medieval Europe
3. Early modern Europe (to c.1789)
4. The modern world

HISTORY; TWO-YEAR COURSE

Examination: 2 papers selected from:

1. Greek history 478-362 B.C.
2. Roman history 133-144 B.C.
3. The history of Britain from the earliest times to 1399
4. The history of Britain 1399-1688
5. The history of Britain from 1688

1 paper selected from:

1. Roman Britain
2. The Carolingians
3. The church in the later Middle Ages
4. Religion and the state in Western Europe, *c* 1500 to *c* 1650
5. The history of Europe, 1660-1815
6. History of Europe, 1815-1918
7. The history of the United States of America from 1783.

*For the degree of Bachelor of Arts in special studies*

The prescribed examinations are set out on pages 367-9.

## PHILOSOPHY

*For the degrees of Bachelor of Arts in general, combined and special studies, and of Bachelor of Science in combined studies*

PHILOSOPHY 1

First year; Monday, 4 to 5.
Elements of logic.

PHILOSOPHY 2

First year; Tuesday, 4 to 5, Thursday, 9 to 10.
Introduction to philosophy.

PHILOSOPHY 3

Second or 3rd year; 2 hours a week at times to be arranged.
Ancient philosophy.

PHILOSOPHY 4

Second or 3rd year; 2 hours a week at times to be arranged.
History of modern philosophy (Descartes to Kant).

PHILOSOPHY 5

Second or 3rd year; 2 hours a week at times to be arranged.
Ethics.

PHILOSOPHY 6

Second or 3rd year; 2 hours a week at times to be arranged.
Political and social philosophy.

PHILOSOPHY 7

Second or 3rd year; 2 hours a week at times to be arranged.
Logic and philosophy of science.

PHILOSOPHY 8

Second or 3rd year; 1 hour a week at a time to be arranged.
Study of a selected philosophical classic.

PHILOSOPHY 9

Second or 3rd year; 1 hour a week at a time to be arranged.
Formal logic, including symbolic logic.

PHILOSOPHY 10

Second or 3rd year; 1 hour a week at a time to be arranged.
Medieval philosophy.

PHILOSOPHY 11

Second or 3rd year; 1 hour a week at a time to be arranged.
Political and social philosophy from Aristotle to Aquinas.

PHILOSOPHY 12

Second or 3rd year; 1 hour a week at a time to be arranged.
History of ideas in relation to English literature, 1600-1750.

PHILOSOPHY 13

Second or 3rd year; 1 hour a week at a time to be arranged.
Contemporary philosophy.

PHILOSOPHY 14

Second or 3rd year; 1 hour a week at a time to be arranged.
Advanced political theory.

PHILOSOPHY 15

Second and 3rd year; 1 hour a week at a time to be arranged.
Theory of criticism.

The two-year course for the degrees in general studies will include, in the candidate's second and third years, one of courses 3 to 7 inclusive: in the third year all candidates attend in addition course 8 (prescribed book). Further courses may be taken with the approval of the head of the department of philosophy. They will normally be selected from courses 10 to 12 above, from the course entitled 'Sociological theory', given in the department of social studies (see page 455), and from the courses in general and social psychology given in the department of psychology (see page 541).

## HISTORY AND PHILOSOPHY OF SCIENCE

*For the degree of Bachelor of Arts in general studies*

HISTORY AND PHILOSOPHY OF SCIENCE 1 E

First year; Monday, 3 to 4; Thursday, 9 to 10, or 4 to 5; Friday, 4 to 5;
fortnightly tutorial at times to be arranged.
The development of European science, and the philosophy of science.

HISTORY OF SCIENCE 3 B OR 4 B (Topics)

Second or 3rd year; Monday and Tuesday, 5.15 to 6.30.
Special topics in the history of scientific thought.

HISTORY OF SCIENCE 3 B (Set Book)

Second or 3rd year; 1 hour a week at times to be arranged.
History of science set book.

For courses in Philosophy and the history of science forming part of schemes of study leading to the degree of Bachelor of Science in combined studies, see page—548

## GEOGRAPHY

*For the degree of Bachelor of Arts in general studies*

ONE-YEAR COURSE

Elements of physical and human geography, 2 lectures a week
Cartography and practical work, 2 hours a week
Tutorial and essay work

EXAMINATION: Elements of physical and human geography, 2 papers
Cartography, a practical test

TWO-YEAR COURSE

The following additional two-year course is available for candidates who wish to offer geography in the final examination for the degree. Candidates must normally have taken the one-year course and passed the relevant examination before proceeding to this course.

First year

Social geography, 1 lecture a week
Physical geography, 1 lecture a week
Cartography and practical work, 3 hours a week

Second year

Economic or political geography, 1 lecture a week
Geography of two selected areas, 2 lectures a week
In certain cases with the approval of the head of the department, the course on one of the selected areas may be replaced by a course in one of the special aspects of geography available in the final year of the special studies scheme, and may be offered in the final examination.

Tutorial and essay work is required in all three years and candidates may be required to attend occasional excursions and field classes, some of which may be held in vacation periods.

FINAL EXAMINATION: 3 papers covering all the subjects taken in the two-year course.

*For the degree of Bachelor of Arts in special studies*

First year

Elements of physical and human geography, 2 lectures a week
Cartography, 4 hours of lectures and practical work a week
Tutorial and essay work

Second year

Social geography, 1 lecture a week
Political geography, 1 lecture a week
Economic geography, 1 lecture a week
Development of geographic thought, 1 lecture a week
Geomorphology, 1 lecture a week
Climate, vegetation and soils, 1 lecture a week

Historical geography of Europe, 1 lecture a week
Geography of the British Isles, 1 lecture a week
Cartography and topographical surveying, 1 lecture a week
Practical work, 3 hours a week
Tutorial and essay work

Third year
Urban geography
Geography of Europe
Geography of *one* of the following areas: North America, Africa, Eastern Asia, Southern Asia, Latin America, the U.S.S.R.*
Cartography—3 hours practical work a week
Special aspects of geography of which each candidate is required to select two:
Geography of planning
Historical geography of Britain
Cartography
Problems of geomorphology
Problems of economic geography
Problems of political geography
Problems of the geography of population
Vegetation—Soil complexes

These courses for any one candidate will together total about 11 to 13 hours a week.

Field work is an integral part of the degree course in special studies and will be tested in the final examination. All students must attend field-training courses in each of the three years; the third-year course will normally be spent abroad.

## CHINESE STUDIES

*For the degree of Bachelor of Arts in special studies*

CHINESE STUDIES SPECIAL STUDIES 1

First year.
Chinese language, Chinese studies (social institutions, China in history).
Examination: 3 papers and an oral examination.

CHINESE STUDIES SPECIAL STUDIES 2

Second year; at times to be arranged.
Chinese language, prescribed texts, Chinese literature.
Chinese studies (political institutions, the revolutionary tradition in China).

CHINESE STUDIES SPECIAL STUDIES 3

Third year; at times to be arranged.
Chinese language, prescribed texts, Chinese literature.
Chinese studies (economic institutions).

*Not all these courses will necessarily be offered every year.

CHINESE STUDIES SPECIAL STUDIES 4

Fourth year; at times to be arranged.
Chinese language, prescribed texts, Chinese literature.
Chinese studies.
Examination: 5 papers and an oral examination.

## THEOLOGY

*For the degree of Bachelor of Arts in general studies (Biblical studies 1 and 2 and Philosophy and history of religion 1 and 2 may be taken as subsidiary subjects by students of any Faculty)*

BIBLICAL STUDIES 1

First year; Tuesday, 2 to 3, Wednesday, 12 to 1, Friday, 2 to 3.
History and religion of Israel to the beginning of the Exile with introduction to the relevant literature; introduction to the Gospels and the Acts of the Apostles.
Examination: 2 papers.

BIBLICAL STUDIES 2 AND 3

Second and 3rd years; 2nd year, Tuesday and Wednesday, 11 to 12; 3rd year, Tuesday and Wednesday, 9 to 10, Thursday, 9 to 10 and 11 to 12.
History and religion of Israel from the beginning of the Exile to A.D. 70 with introduction to the relevant literature of the Old Testament and Apocrypha; introduction to the Epistles and Apocalypse; outlines of the history of the Christian Church (in the 2nd year); set books of Old Testament and New Testament, outlines of Christian theology (in the 3rd year).
Examination: 3 papers.

PHILOSOPHY AND HISTORY OF RELIGION 1

First year; Tuesday, 9 to 10, Thursday, 3 to 4, Friday, 10 to 11.
A general survey of the great living religions with special study of one religion other than Christianity or the religion of Israel from prescribed texts in English translation.
Examination: 2 papers.

PHILOSOPHY AND HISTORY OF RELIGION 2 AND 3

(a) *Either* THE PHILOSOPHY OF RELIGION 2 AND 3

Second and 3rd years; 2nd year, Tuesday, 12 to 1, Thursday, 3 to 4, Friday, 10 to 11; 3rd year, Tuesday, 3 to 4, Friday, 9 to 10.
The philosophical approach to religion (in the 2nd year); religious ethics with special reference to the Christian ethic (in the 3rd year).
Examination: 1 paper in 2 and 1 paper in 3.

(b) *Or* THE HISTORY OF RELIGION 2 AND 3

Second and 3rd years; Tuesday, 11 to 12, Friday, 9 to 10, or as arranged.
Second and third year candidates combine to take (a) Hinduism and (b) Islam in alternate sessions. The subject for 1964-5 is Islam.
Examination: 1 paper in (a) and 1 paper in (b).

*For the degree of Bachelor of Arts in special studies*

OLD TESTAMENT 1 (HEBREW)

First year; Wednesday, 10 to 11, Thursday, 11 to 12, Friday, 9 to 10.
Hebrew grammar, translation and exegesis, introduction to the Pentateuch.
Examination: 1 paper.

OLD TESTAMENT 2

Second year; Wednesday, 12 to 1, Thursday, 10 to 11, Friday, 11 to 12.
History and religion of Israel to the beginning of the Exile with introduction to relevant literature; prescribed Old Testament texts, *either* entirely in Hebrew *or* partly in Hebrew and partly in English *or* entirely in English.

OLD TESTAMENT 3

Third year; Wednesday, 11 to 12 and 12 to 1, Thursday, 11 to 12.
History and religion of Israel from the beginning of the Exile to A.D. 70 with introduction to relevant literature; prescribed Old Testament texts *either* entirely in Hebrew *or* entirely in English.
Examination: 2 papers.

NEW TESTAMENT GREEK

First year; Tuesday, 3 to 4, Wednesday, 12 to 1, Friday, 3 to 4.
The Greek of the New Testament.
Examination: 1 paper.

NEW TESTAMENT LANGUAGE AND LITERATURE 1

Second year; Thursday, 2 to 3, Friday, 12 to 1 and 2 to 3.
Unprepared translation and the grammar and syntax of New Testament Greek; translation, criticism and exegesis of a prescribed Gospel; introduction to the Gospels and the Acts of the Apostles; textual criticism.

NEW TESTAMENT LANGUAGE AND LITERATURE 2

Third year; Tuesday, 11 to 12 and 12 to 1, Friday, 10 to 11.
Unprepared translation from the Greek New Testament; translation, criticism and exegesis of a prescribed Epistle; introduction to the Epistle and Apocalypse; the New Testament canon.
Examination: 2 papers.

CHURCH HISTORY 1

Second year; Wednesday and Thursday, 11 to 12.

The pre-Nicene Church to A.D. 313.

CHURCH HISTORY 2

Third year; Tuesday and Thursday, 10 to 11; other hours as arranged.
One option selected from the following as available:

(a) The Christian Empire A.D. 313 to 604.
(b) Medieval Christendom A.D. 1054 to 1517.
(c) Reformation and Revival A.D. 1453 to 1789
(d) The modern Church A.D. 1750 to the present day.

Examination: 2 papers.

BIBLICAL AND HISTORICAL THEOLOGY

Second and 3rd years; Tuesday, 2 to 3 and Thursday, 12 to 1.
Second and third year candidates combine to take (a) the Incarnation and the Trinity and (b) the Atonement in alternate sessions. The subject for 1964-5 is the Atonement.

Examination: 2 papers at the end of the third year.

## MUSIC

*For the degree of Bachelor of Arts in general and combined studies*

GENERAL STUDIES 1

First year; at times to be arranged.
History of music from 900 to 1700; form and analysis in music; harmony and counterpoint; practical training.
Examination: 2 papers.

*For the degree of Bachelor of Arts in special studies*

MUSIC SS1

First year; at times to be arranged.
History of music from 900 to 1700; form and analysis; harmony; counterpoint; practical training.
Examination: 3 papers.

MUSIC SS2

Second year; at times to be arranged.
History of music from 1685 to 1828; special subject; advanced harmony; counterpoint and double counterpoint; acoustics;* practical training.
Examination: 4 papers.

MUSIC SS3

Third year; at times to be arranged.
History of music since 1880; special subject; orchestration; elementary composition, instrumental and vocal; counterpoint including canon; fugue; practical training.
Examination: 7 papers.

At the beginning of his third year each candidate for the degree of Bachelor of Arts in special studies in music must submit to the head of the department proposals for the subject and title of an essay of about 8,000 words which he is required to offer. This essay, which shall be the unaided work of the candidate, must be submitted not later than 1 May in the year in which the candidate is taking the final examination.

*This course is given in alternate years and candidates will take the examination at the end of the year in which they attend the course.

## FINE ART

*For the degree of Bachelor of Arts in general studies*

FINE ART; ONE-YEAR COURSE

First year; 3 lecture hours a week at times to be arranged.
An outline study of the history of art and architecture from the earliest times until the Renaissance. The elements of art criticism.
Examination: 1 paper and short *viva voce* examination.

FINE ART; TWO-YEAR COURSE

Second year; 4 lecture hours a week. Third year; 3 lecture hours and one hour of approved study a week.
History of painting and sculpture; the Renaissance in Italy and the North, and from the High Renaissance to the present day. History of architecture. History of fashion.
Examination: 3 papers.

*For the degree of Bachelor of Arts in special studies*

FINE ART; ONE-YEAR COURSE

The scheme of study will be the same as that for students reading for the degree of Bachelor of Arts in general studies but in addition students will undertake practical work which will be examined by a test and by the submission of a portfolio representing a year's work.

FINE ART; THREE-YEAR COURSE

During the first two years of this course the scheme of study will be the same as that for students reading for the degree of Bachelor of Arts in general studies; but with the addition of practical art criticism (no examination) and practical work which will be examined at the end of the student's third year. During the last year of the course further practical work shall be undertaken and examined; there shall during this final year be one lecture a week on the theory and teaching of art, examined by means of one three-hour paper.
The examinations at the end of the third year will constitute Part I of the final examination and the results of this will be taken into account in the final assessment of the student's work.

# THE FACULTY OF ECONOMIC AND SOCIAL STUDIES

## ORDINANCE III

## DEGREES IN COMMERCE

1. The degrees in commerce shall be:

Bachelor of Commerce (B.Com.)
Master of Commerce (M.Com.)
Doctor of Philosophy (Ph.D.)

### THE DEGREE OF BACHELOR OF COMMERCE

2. The degree of Bachelor of Commerce shall be conferred as an ordinary degree or as a degree with Honours, according to the standard reached in the final examination.

3. All candidates for the degree of Bachelor of Commerce shall be required to have passed the examination for matriculation or to have obtained exemption therefrom, and thereafter to have pursued approved courses of study for not less than three academic years.

4. The complete course of study for the degree of Bachelor of Commerce shall be divided into two parts, called respectively the qualifying course and the final course.

5. Every candidate shall be required to pass two examinations, the qualifying and the final. No candidate who fails to satisfy the examiners at the first attempt shall be eligible for the award of Honours at any subsequent examination in the Faculty.

6. The qualifying and final examinations shall ordinarily be held in June. There shall also be a supplementary qualifying examination in September, at which those candidates only may present themselves who have obtained the permission of the Senate.

7. Candidates who have failed at a qualifying examination in June, and have obtained permission to present themselves at the following supplementary examination may be excused such part of the supplementary examination as the combined examination committee, on report from the examination committee for the degree of Bachelor of Commerce, may determine.

8. Except with the special permission of the Senate, candidates will not be allowed to present themselves for the final examination for the degree unless they have passed the required qualifying examinations not later than the preceding September.

9. (a) Candidates who have passed the final examination for the degree of Bachelor of Commerce may be awarded

(i) the degree of Bachelor of Commerce with first-class honours, or
(ii) the degree of Bachelor of Commerce with second-class honours, first division, or
(iii) the degree of Bachelor of Commerce with second-class honours, second division, or

(iv) the degree of Bachelor of Commerce with third-class honours, or
(v) the degree of Bachelor of Commerce.

(b) The names of successful candidates in each group shall be arranged in alphabetical order.

[See also the regulations on page 428.]

## THE DEGREE OF MASTER OF COMMERCE

10. The degree of Master of Commerce may be conferred, on payment of the proper fee, and subject to the conditions laid down in articles 11, 12, and 13 on:

(a) Registered Bachelors of Commerce of the University who have graduated with Honours or, with the special recommendation of the Board of the Faculties of Arts, Economic and Social Studies and Law, registered Bachelors of Arts of the University who have graduated with Honours in the field of economics or economic and political science, after not less than one year from the date of their graduation;

(b) Other registered graduates of the University and graduates of other approved universities, after not less than two years from the date of their graduation.

11. Candidates who are not registered Bachelors of Commerce or Bachelors of Arts of the University with Honours in the field of economics or in economic and political science shall be required:

(a) to satisfy the Senate that they are qualified to pursue advanced study or research within the field of economics and commerce;

(b) to attend approved courses of study within the University for not less than two years; but it shall be in the power of the Senate, on the recommendation of the Board of the Faculties of Arts, Economic and Social Studies and Law, to excuse specially qualified graduates of the University from this attendance.

12. Every candidate, with the exception provided for under article 13, shall present a thesis, satisfactory to the Senate, on a subject approved by the Board of the Faculties of Arts, Economic and Social Studies and Law, embodying the results of his independent study or original research within the field of economics and commerce.

13. Registered Bachelors of Commerce of the University who have not graduated with Honours or other registered graduates of the University or graduates of other approved universities may be permitted or required, in place of the thesis prescribed under article 12, to submit themselves for examination upon a course or courses in which instruction is given within the department of economics and commerce, and to present a dissertation satisfactory to the Senate on a subject approved by the Board of the Faculties of Arts, Economic and Social Studies and Law.

[See also the regulations on page 429.]

## THE DEGREE OF DOCTOR OF PHILOSOPHY

[The degree of Doctor of Philosophy is governed by ordinance II, articles 50 to 52 and relevant regulations which are set out on pages 299 and 310.]

# REGULATIONS FOR DEGREES

## THE DEGREE OF BACHELOR OF COMMERCE

1. There shall be two examinations as follows:

*The qualifying examination*

The qualifying examination will consist of:

(a) Economics qualifying (4 papers)

(b) For accountancy students—
Accountancy qualifying (1 paper)
Commercial law (1 paper)

(c) For technology students—
An approved technological subject
and *one* of:
An approved natural science
Mathematics 1A (2 papers)
Industrial management I (2 papers)

(d) For law students—
Accountancy qualifying (1 paper)
English legal system and Contract (1 paper)

*The final examination*

The final examination will consist of:

(a) Economic theory (1 paper)
(b) Money and finance (1 paper)
(c) Industry and industrial relations (1 paper)
(d) Essay (1 paper)

together with

For accountancy students

(e) Commercial law (1 paper)
(f) Accountancy (4 papers)

For technology students

(g) An approved technological subject (6 papers)

For law students

(h) Accountancy (1 paper)
(i) Mercantile law I
(j) Mercantile law II
(k) Mercantile law III
(l) Mercantile law IV

## THE DEGREE OF MASTER OF COMMERCE

2. Candidates who are not registered graduates of the University must become registered as students of the University.

3. Candidates who are not registered Bachelors of Commerce of the University who have graduated with Honours or registered Bachelors of Arts of the University who have graduated with Honours in the field of economics or in economic and political science shall be required:

(a) to pursue a course of advanced study or research under the supervision of the head of the department of economics and commerce;

(b) to give evidence to the Senate at the end of the first year of their period of study that their work has been satisfactory.

4. Candidates may be required to present themselves for examination [written or oral or both] in the subject of their thesis [or dissertation].

5. A candidate shall not be permitted to submit as his thesis one for which a degree has been awarded in this or any other university, or which is under consideration for the award of a degree in another university; but he shall not be precluded from incorporating in his thesis any part of such work provided that he states his desire to do so at the time of his application for acceptance as a candidate, and in the thesis itself indicates the part of the work so incorporated. A copy of the thesis approved for the degree will be retained in the University library.

# REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES*

Candidates should note that in order to qualify for admission to a scheme of study for a first degree in the University, they must satisfy both a *General Requirement* and a *Course Requirement*. For information regarding the *General Requirement*, for purposes of matriculation, candidates should write to the Secretary, Joint Matriculation Board, Manchester 15. The *Course Requirement* is set out at the beginning of the regulations for each degree scheme of study in the Faculty of Economic and Social Studies.

**COMBINED STUDIES SCHEMES IN THE FACULTY OF ECONOMIC AND SOCIAL STUDIES:** The schemes of study, as set out below, extend over a period of three years and lead to the degree of Bachelor of Arts in combined studies.

## *Course Requirement*

Unless otherwise stated the course requirements are the same for all combined studies schemes in the Faculty of Economic and Social Studies.

For admission to these courses passes in two approved subjects at advanced level are required and a third is preferred.

*One* of these passes should preferably be in history.

The *second* should preferably be in mathematics.

The *third* may be in any approved subject at advanced level.

Candidates not having a pass at advanced level in history or mathematics must have a pass at ordinary level.

*First year.* For the course of study in the first year of all the combined schemes listed below, see regulation 8, page 303.

**ECONOMICS AND POLITICS:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in Economics and Politics.

## *Course Requirement*

This will be the same as set out above.

## *Final Examination*

Economic theory
Industry and industrial relations
Money and finance
Politics (two papers)
Political and social theory

and *three* of the following:*†
Economic development
Control of industry
British fiscal and monetary policy
The government of a special area or areas
International relations
Political sociology
Labour and industrial relations.

**ECONOMICS AND SOCIOLOGY:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in Economics and Sociology.

*Course Requirement*
This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 430.

*Final Examination*
Economic theory
Industry and industrial relations
Money and finance
Sociology (2 papers)
Methods of social investigation (1 paper)
and *three* of the following:*†
Economic development
Control of industry
Social psychology
Criminology
Demography
The history and principles of social policy‡
Labour and industrial relations.

**GEOGRAPHY AND POLITICS:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in Geography and Politics.

*These subjects may be varied from time to time.

†In the field of labour and industrial relations, three subjects are usually available, which are normally taken together, except that another approved subject may be offered in place of one of them.

‡Students choosing this option will be expected to take two of their papers in this subject.

*Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 430.

*Final Examination*

Human geography
Physical geography
Regional geography
Political geography
Politics (two papers)
Political and social theory
The government of a special area

together with *one* of the following:

Geography of planning
Urban geography
International relations
Political sociology.

All candidates must attend a course in cartography and field excursions, as directed, in the department of geography as an integral part of the degree requirements.

**GEOGRAPHY AND SOCIOLOGY:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in Geography and Sociology.

*Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 430.

*Final Examination*

Human geography
Physical geography
Regional geography*
Sociological theory
Social institutions
Methods of social investigation

together with *three* papers selected from the following:

Problems of the geography of population
The geography of planning
The development of geographic thought
Urban geography

*or* three papers selected with the permission of the head of the department of social studies from those offered as optional subjects in the special studies degree in sociology.

*Students reading for this degree will normally study the geography of the British Isles.

All candidates must attend a course in cartography and field excursions, as directed, in the department of geography as an integral part of the degree requirements.

**PHILOSOPHY AND POLITICS:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in Philosophy and Politics.

### *Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 430.

### *Scheme of Study*

The scheme of study for the first year shall normally be the same as that for the degree of Bachelor of Arts in general studies or for the degree of Bachelor of Arts in special studies in sociology, provided in each case that it includes philosophy and politics. A qualifying examination in four subjects which must be passed by candidates before they proceed to further study, will be held at the end of the first year. Subject to the approval of the Board of the Faculties of Arts, Economic and Social Studies and Law, suitably qualified candidates may be permitted to vary the scheme study required for the first year.

During the second and third years candidates shall be required to attend approved courses in philosophy and politics and to submit written work as directed.

### *Final Examination*

1. Political and social philosophy
2. Contemporary political thought
3. Politics 1
4. Politics 2
5. The government of a special area or areas
6. Ethics
7. Logic and general philosophy
8. The history of *either* ancient and medieval *or* modern philosophy
9. A special subject to be chosen with the approval of the heads of the departments of philosophy and social studies.

**PSYCHOLOGY AND SOCIOLOGY:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in Psychology and Sociology.

### *Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 430.

*Final Examination*

Sociology (2 papers)
Methods of social investigation (1 paper)
Psychology (3 papers)
Social psychology (1 paper)
together with *two* papers chosen from the following:

The institutions of advanced societies
Criminology
Demography 2
Sociology of religion
Experimental psychology
Development and educational psychology
Clinical psychology
Vocational psychology
Special theories of psychology.

**SOCIOLOGY AND PHILOSOPHY:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in combined studies in Sociology and Philosophy.

*Course Requirement*

This will be the same as set out under REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN COMBINED STUDIES, page 430.

*Final Examination*

Sociology (2 papers)
Methods of social investigation (1 paper)
Ethics
Logic and general philosophy
History of ancient and medieval philosophy
*or* History of modern philosophy
Political and social theory
*or* Political and social philosophy.
together with *two* papers selected, with the approval of the heads of the departments of philosophy and social studies, from the subjects which may be offered as options for the special studies degree in philosophy or in sociology.

For the schools of combined studies in economic history and geography, economics and geography and economics and history, see under the Faculty of Arts, pages 316–18.

# REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF ARTS IN SPECIAL STUDIES

Candidates should note that in order to qualify for admission to a scheme of study for a first degree in the University, they must satisfy both a *General Requirement* and a *Course Requirement*. For information regarding the *General Requirement*, for purposes of matriculation, candidates should write to The Secretary, Joint Matriculation Board, Manchester 15. The *Course Requirement* is set out at the beginning of the regulations for each degree scheme of study in the Faculty of Economic and Social Studies.

The Ordinance and general regulations governing the degree of Bachelor of Arts will be found on pages 290 and 302. Regulations prescribing the examinations in economics, in sociology and in politics for the degree of Master of Arts will be found on page 386.

**ECONOMICS:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in special studies in Economics.

## *Course Requirement*

For admission to the course passes in two approved subjects at advanced level are required and a third is preferred. These passes may be in any approved subject.

## *Examination*

First year

Economics (4 papers)
English economic history (2 papers)
*One* of the following:
Politics (2 papers)
*or* Sociology (2 papers)
*or* Philosophy (2 papers)
*or* Mathematics (2 papers)

This qualifying examination must normally be passed by candidates before they proceed to further study.

Third year

Economic theory (1 paper)
Money and finance (1 paper)
Economics of industry (1 paper)
Industrial relations (1 paper)
Essay (1 paper)
*Either* Methods of economic and social statistics (1 paper) *or* Recent economic history (1 paper)
and *three* papers chosen with the approval of the head of the department

normally from one of the following fields,* though with some possibility of variation by special permission:

Theoretical economics
General economic policy including development policy
Labour and industrial relations
Economic history
†Mathematical and statistical economics.

**ECONOMICS WITH STATISTICS:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in special studies in Economics with Statistics.

## *Course Requirement*

For admission to the course passes in two approved subjects at advanced level are required, and a third is preferred.

*One* of these passes must be in mathematics.

The *second* and *third* may be in any approved subject at advanced level.

* The papers offered in these fields may vary from one session to another. In the session 1963-64 they were:

In the theoretical field:
- Economic dynamics
- International economics
- Theory of income distribution

In the field of general economic policy
- Control of industry
- British fiscal and monetary policy
- Economic development with special reference to East Africa

In the field of economic history:
- The British economy 1603-25
- The British economy 1896-1914
- Industry and government in the U.S.A. 1896-1914
- Industrial relations in the British coal industry 1919-39

In the field of labour and industrial relations:
- Comparative industrial relations and labour problems of development
- Theory and practice of trade unionism
- Industrial relations at the workplace
- Industrial relations in the British coal industry 1919-39

It is at present proposed that the papers in the field of mathematical and statistical economics should be:
- Social accounting
- Econometrics
- Mathematical economics
- Operations research
- Decision theory
- Programming and game theory
- Demography and actuarial statistics
- Social surveys.

†This field is available only to students who are also taking the paper on methods of economic and social statistics. It consists of a compulsory paper on social accounting and at least two other papers.

## *Examination*

First year

Economics qualifying (3 papers)
Statistics 2A (2 papers)
Pure mathematics (1 paper)

This qualifying examination must normally be passed by candidates before they proceed to further study.

Third year

Economic theory (1 paper)
Money and finance (1 paper)
Industry and industrial relations (1 paper)
Essay (1 paper)

and *either:*

Mathematical statistics (3 papers)
Optional subjects (2 papers)

*or:*

Mathematical statistics (1 paper)
Methods of economic and social statistics (1 paper)
Optional subjects (3 papers)

The optional subjects will be chosen, with the approval of the Head of the department, from the following list*:

Social accounting
Econometrics
Mathematical economics
Operations research
Decision theory
Programming and game theory
Demography and actuarial statistics
Social surveys.

**POLITICAL STUDIES:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in special studies in Political Studies.

## *Course Requirement*

For admission to the course passes in two approved subjects at advanced level are required and a third is preferred.

*One* of these passes must be in history.

The *second* and *third* may be in any approved subject at advanced level.

## *Scheme of Study*

First year

Politics

*Not all these topics will necessarily be offered in any one year.

Sociology
Economics
Introduction to philosophy(S) *or* mathematics*

A qualifying examination consisting of two papers in each of these subjects, which must be passed by candidates before they proceed to further study, will be held at the end of the first year.

*Final Examination*

Politics (2 papers)
Political and social philosophy (1 paper)
Contemporary political thought (1 paper)
Constitutional history of Great Britain since 1660 (1 paper)
Political history of Western Europe and the U.S.A. from 1789 (1 paper)
*Three* of the following:†
The government of a special area or areas
Political geography
Political sociology
Public finance
Social administration
A special subject in political philosophy
International relations
Logic and general philosophy
Ethics
Industrial relations
‡Political problems of developing societies
‡Sociological problems of developing societies
‡Problems of development in a particular area.

**SOCIOLOGY:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Arts in special studies in Sociology.

*Course Requirement*

For admission to the course passes in two approved subjects at advanced level are required, and a third is preferred.

*One* of these passes should preferably be in history.
The *second* preferably in mathematics.
The *third* may be in any approved subject at advanced level.

Candidates not having a pass at advanced level in history or mathematics must have a pass at ordinary level.

*Available after October 1965. Candidates will take the paper in Logic and Pure mathematics 1A, or Logic and Pure mathematics 2A if they have achieved exemption level from Mathematics 1A at the A level examination.

†Not all these special subjects will necessarily be offered in any one year and new subjects may be added from time to time.

‡Available to students entering in 1965 or later. These three options must normally be offered together.

## *Scheme of Study*

Schemes of study for the degree courses in the department of social studies have been revised for students entering the University in 1964 or later.

The first year of the special studies course remains as at present, but the number of compulsory subjects in the final course has been reduced from six to five in order to make it possible to increase the number of optional papers. In future, students will be able to choose one of five groups, for each of which one member of the academic staff will act as tutor. These groups will be as follows:

Group A: Social policy and the welfare state
Group B: Politics
Group C: Problems of developing countries
Group D: Sociology
Group E: Quantitative methods in the social sciences (mathematics to advanced level will be required for this group)

The subjects of study are as follows:

First year
(1) Sociology
(2) Politics
(3) Economics
(4) *Either* Introduction to philosophy (S)
*or* Mathematics*

A qualifying examination consisting of two papers in each of these subjects, which must be passed by candidates before they proceed to further study, will be held at the end of the first year.

Second and third years
(1) Sociology (2 papers)
(2) Methods of social investigation (1 paper)
(3) The institutions of advanced societies (1 paper)
(4) *Either* Political and social theory *or* Social psychology (1 paper) together with *one* of the following groups:

*Group A*: Social Policy and the Welfare State
(i) The history and principles of social policy (2 papers) and *two* of the following subjects:
(ii) Criminology
(iii) Problems of health and disease
(iv) Education
(v) Demography 2.

*Group B:* Politics
Candidates selecting this group must take Political and Social Theory as their optional subject under (4) above.

*Candidates will take the paper in Logic and Pure Mathematics 1A, or in Logic and Pure Mathematics 2A if they have achieved exemption level from Mathematics 1A at the 'A' level examination.

(i) Politics (2 papers)
and *two* of the following subjects:
(ii) Political sociology
(iii) The government of a special area or areas
(iv) International relations
(v) Political problems of developing societies.

*Group C:* Problems of Developing Countries
(i) Sociological problems of developing societies
(ii) Political problems of developing societies
(iii) Economic development
(iv) Problems of development with special reference to a particular area.

*Group D:*
(i) The development of sociological thought together with *three* of the following:
(ii) Criminology
(iii) The sociology of religion
(iv) Political sociology
(v) Demography 2
(vi) Theory of social change
(vii) Urban sociology.

*Group E:*

Students selecting this group must have taken mathematics to advanced level in the General Certificate of Education examination. They will normally be expected to take mathematics at the qualifying examination.

(i) Methods of social statistics (2 papers) together with *two* of the following:
(ii) Demography 1 (vital statistics)
(iii) *Demography 2
(iv) Sample survey theory and methods
(v) Social accounting
(vi) Problems of decision and game theory.

The final examination will consist of nine papers taken at the end of the third academic year in the second- and third-year subjects.

## CHINESE STUDIES

For the scheme of study and courses in Chinese studies, see pp. 371 and 421.

*May only be offered together with Demography 1.

# REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR DIPLOMAS *

## POSTGRADUATE DIPLOMA IN INDUSTRIAL MANAGEMENT

Candidates must normally be graduates with Honours of an approved university.

Candidates may be required to pass a special qualifying examination.

Candidates will be required to attend the University of Leeds for one academic year of full-time study. The University reserves the right to suspend the scheme in any year if the entry of students is insufficient.

Candidates must attend the prescribed courses and field instruction satisfactorily and satisfy the examiners in the examinations and other tests and assignments prescribed. The diploma may be awarded with distinction when the work of a student is judged to be of outstanding merit.

Students will be required to undertake field projects in industry, and to write reports on them.

*Scheme of Study*†

Section A: Economics: either (i) Basic
or (ii) Advanced

Section B: Behavioural Analysis of Organisations:
either (i) Basic
or (ii) Advanced

Section C: Quantitative Methods
either (i) Basic
or (ii) Advanced

Section D: Industrial Practice‡

Section E: Diagnosis and problem-solving in industry, including a field project.

Candidates are required to take five courses including one course in each of sections A, B, C, D, and E. At least one of these must be an advanced course.

The diploma programme includes a weekly seminar throughout all three terms and a residential seminar lasting up to three weeks. Candidates are expected to continue field project work and other assigned work during the University vacations.

## DIPLOMA IN DEVELOPMENT ADMINISTRATION

*Qualifications for Admission*

While a University degree (preferably in economics, commerce, politics or public administration) is a desirable qualification, it is not regarded as

*Governed by the Ordinance and regulations for diplomas in the Faculty of Arts, pages 301 and 313.

†Not all of these courses will necessarily be offered in any one year and new subjects may be added from time to time.

‡This course provides a critical examination of an area of management practice, e.g. management accounting, personnel, marketing, or electronic computation.

essential. Applicants without university degrees will be considered for admission if they have had suitable practical experience and/or possess appropriate professional qualifications. A maximum of twenty members will be admitted to each course.

Candidates may apply individually or be recommended by governments or other public authorities. Interviews will be arranged and, if necessary, tests prescribed for applicants. All applicants must provide evidence of having achieved the required degree of competence in the English language.

*Scheme of Study*

The scheme of study will extend over one academic year of full-time study, and will include field instruction in the Christmas and Easter vacations.

Students must attend the prescribed courses and field instruction satisfactorily and satisfy the examiners in the examinations and other tests and assignments prescribed.

They will also be required to spend about a month attached to a public enterprise, either in Britain or abroad, and to make written or oral reports to their field-work supervisor as may be required.

*Scheme of study for the Diploma:*

(a) Lecture courses:
  (1) Economic development;
  (2) Politics and administration in the developing areas;
  (3) Public enterprise;
  (4) Industrial management and Industrial relations;
(b) Seminar work
(c) Essays as may be required.

During term-time, class work will occupy between twelve and fifteen hours a week.

*Examination*

The final examination will consist of four papers, one on each lecture course, and will include an assessment of the candidate's work and field projects undertaken during the year.

A diploma with distinction may be awarded to a student whose work is judged to be of outstanding merit.

# PRESCRIBED SCHEMES OF STUDY

Candidates should note that in order to qualify for admission to a scheme of study for a first degree in the University, they must satisfy both a *General Requirement* and a *Course Requirement*. For information regarding the *General Requirement*, for purposes of matriculation, candidates should write to The Secretary, Joint Matriculation Board, Manchester 15. The *Course Requirement* is set out at the beginning of each scheme of study for the degree of Bachelor of Commerce.

The following notes are explanatory to the ordinances and regulations governing both the degree of Bachelor of Commerce and also the degree of Bachelor of Arts in special studies. They should be read in conjunction with them and with those sections of the *Calendar* entitled Courses in the Faculties of Arts, of Science, of Technology and of Economic and Social Studies.

Attendance at lectures in economics is mostly voluntary for persons reading economics or commerce for the Bachelors' degrees. Attendance at tutorials, at lectures in accountancy and at the second and third-year seminars in economics is compulsory where prescribed.

The following courses, seminars and tutorials are recommended or prescribed at the specified stages of students' careers. The figures *in brackets* show the number of hours lecture time a week. Figures *not* in brackets indicate the course number.

## FOR THE FIRST YEAR

The recommended lecture courses in the subjects required in the first year of the schemes of study for the degree of Bachelor of Arts in special studies in economics are:

The structure and working of the economy (1½)
Production, consumption and markets (1½)
Introduction to economic and social statistics (1)
English economic history 1066–1914 (2)

*and either*

Politics (2)
*or* Sociology (2)
*or* Philosophy (3)
*or* Mathematics (4)

Students reading for the degree of Bachelor of Commerce are recommended to attend Structure and working of the economy (1½), Production, consumption and markets (1½) and Introduction to economic and social statistics (1); those taking the degree with accountancy or law as a principal subject are required to attend Accountancy 1 (2 hours a week); and all students for this degree are required to attend the following courses prescribed in other subjects, particulars of which will be found elsewhere in the *Calendar* under the appropriate Faculties:

PRINCIPAL SUBJECT:

| *Accountancy* | *Technological subject* | *Law* |
|---|---|---|
| Commercial law 1 | *Prescribed courses in the technological subject<br>*and*<br>†Mathematics 1A<br>*or*<br>Mathematics 1Z<br>*or*<br>An approved natural science<br>*or*<br>‡ Industrial management I | Commercial law 1<br>English legal system (1) |

FOR THE SECOND AND THIRD YEARS

*The degree of Bachelor of Arts in special studies in economics*

Second year

Money and banking (1)
Public finance (1)
*Either* Recent economic history (2)
***or*** Methods of economic and social statistics (2)
Economics of industry (2) for half session
Industrial relations (1)
§Second-year economics seminar (1)

Tutorial classes ranging over the main lecture subjects will be held weekly and individual tutorials less frequently.

Third year

§Third-year economics seminar (1)
Economic theory revision lecture (1)
There will also be:
Individual tutorials
Tutorials or classes weekly in each of *three* selected subjects, to be chosen with the approval of the head of the department

*Those prescribed for Textile industries are Textile calculations 1A and Textiles 1T comprising:

Raw materials 1A
Yarn manufacture 1T
Fabric manufacture 1T
Textile chemistry 1A

†This option is available when Textile industries is taken as a principal subject. With other technological principal subjects, mathematics is normally compulsory.

‡Consisting of introduction to industrial management and elementary sampling statistics.

§In these seminars papers are presented by students or groups of students throughout the year (in the second-year seminar) or throughout the autumn and spring terms (in the third-year seminar). In addition, there are intensive two-day courses, normally at a residential college, in each of the three years.

normally from one of the following fields though with some possibility of variation by special permission:

Theoretical economics
General economics including development policy
Economic history
Labour and industrial relations
*Mathematical and statistical economics.

**COMMERCE:** There are three schemes of study each extending over a period of three years and leading to the degree of Bachelor of Commerce (B.Com.) with Honours (according to standard reached in final examination) or as ordinary degree; B.Com., with Accountancy as a principal subject, B.Com. with Law as a principal subject, and B.Com., with Technology as a principal subject.

*Course Requirement*

For admission to any of the schemes of study passes in two approved subjects at advanced level are required and a third is preferred. These passes may be in any approved subject.

*The degree of Bachelor of Commerce with accountancy as a principal subject*

Second year
Money and banking (1)
Public finance (1)
Accountancy 2 (3)
Commercial law II (1)
Second-year economics seminar (1)
Economics of industry (1½)
Industrial relations (1)
Tutorial classes ranging over the main lecture subjects will be held weekly and individual tutorials less frequently.

Third year
Social accounts seminar (1)
Third-year economics seminar (2)
Accountancy 3 (4)
Commercial law III (1)

*The degree of Bachelor of Commerce with law as principal subject*

Second year
Economics of industry (1½)
Industrial relations (1)
Money and banking (1)

*This field is available only to students who are also taking the course on methods of economic and social statistics. It consists of a paper on social accounting and at least two other papers.

Public finance (1)
*Accountancy 2 (3)
Second-year economics seminar (1)
Industrial law (1)
Public law (6)

Third year

Third-year economics seminar (1)
Mercantile law I (Company law) (1)
Mercantile law II (Bankruptcy and partnership) (1)
Mercantile law III (Sale and carriage of goods) (1)
Mercantile law IV (Agency, guarantee and indemnity and negotiable instruments) (1)
Law seminar (1)

*The degree of Bachelor of Commerce with textile industries as a principal subject*

[The programme recommended for students reading for the degree of Bachelor of Commerce with other technological principal subjects is similar to this.]

Second year

Money and banking
Public finance
Economics of industry
Industrial relations
Second-year economics seminar
Textile chemistry 2A
Textile physics 2A
Textile technology comprising:
Raw materials 2T
Woollen yarn manufacture 2T and
Worsted yarn manufacture 2T
*or* Staple fibre yarn manufacture 2T
Weaving mechanisms 1T
Cloth structure 1T
Cloth analysis 1T
Knitting 1A
Physical testing (statistics) 1
Physical testing (methods)
*or* Textile testing 1A
Textile calculations 1B

Tutorials in economics are held weekly or fortnightly.

Third year

Third-year economics seminar
Seminar in textile economics
Textile chemistry 3A

*Examined at the end of the second year.

Textile physics 3A
Textile technology comprising:
Woollen yarn manufacture 3T and
Worsted yarn manufacture 3T
*or* Staple fibre yarn manufacture 3T
Weaving mechanisms 2T
Cloth structure 2T
Cloth analysis 2T
Cloth finishing 1T and 2T
Complex textiles

**Tut**orials in economics are held weekly or fortnightly.

# COURSES IN THE FACULTY OF ECONOMIC AND SOCIAL STUDIES

## ECONOMICS

### THE STRUCTURE AND WORKING OF THE ECONOMY

For 1st-year students reading for the degrees of Bachelor of Commerce, or Bachelor of Arts in special studies in economics or economics with statistics or Bachelor of Science with Honours in agricultural economics.

One and one-half hours a week.

The circulation of money, the social accounts, the industrial and occupational structure of economies, the determinants of the level of activity, growth and fluctuations of the economy.

Examination: Parts of 3 papers of 3 hours.

### PRODUCTION, CONSUMPTION, AND MARKETS

For 1st-year students reading for the degrees of Bachelor of Commerce, or Bachelor of Arts in special studies in economics or economics with statistics, or Bachelor of Science with Honours in agricultural economics.

One and one-half hours a week.

The theories of production, the firm, consumer's choice, markets and distribution, with illustrative material.

Examination: Parts of 3 papers of 3 hours.

### INTRODUCTION TO ECONOMIC AND SOCIAL STATISTICS

For 1st-year students reading for the degree of Bachelor of Commerce, or Bachelor of Arts in special studies in economics or economics with statistics, or Bachelor of Science with Honours in agricultural economics.

One hour a week.

The elements of statistical method; averages, measures of dispersion, sampling, simple correlation and regression, index-numbers, together with an introduction to descriptive statistics used in the social sciences.

### GENERAL ECONOMICS

For all 1st-year students taking economics for a degree other than Bachelor of Commerce or Bachelor of Arts in special studies in economics or economics with statistics.

Two hours a week.

A general course including elements of social accounting, monetary systems, theory of production, demand, supply and price formation, distribution, industrial organisation, the level of activity, and public policy.

Examination: 2 papers of 3 hours each.

### ECONOMIC THEORY

For 2nd-year students reading for the degree of Bachelor of Arts in combined studies with economics or economic history.

Two hours a week.

The course: (1) outlines the main stages in the development of economic theories; (2) deals with the determinants of individual and aggregate consumption; (3) analyses the cost and revenue structures of firms in different market conditions; (4) deals with the determinants of factor prices; (5) contrasts the approach to the problem of full employment of the 'classical' writers with that of the 'Keynesians' and evaluates market structures from the point of view of efficiency and equity; (6) develops some theoretical points arising from the interdependence of national economies, and deals with the basic mechanisms involved in international trade.

Examination: 1 paper of 3 hours.

ECONOMICS OF INDUSTRY

For 2nd-year students reading for the degrees of Bachelor of Arts in special studies in economics or economics with statistics, or in combined studies with economics, or Bachelor of Commerce, or Bachelor of Science with Honours in agricultural economics.

One and one-half hours a week.

The first part of the course outlines the main characteristics of the British industrial structure and examines market structures and performance, including that of the public sector. The second part is concerned with particular industrial problems, including finance, advertising, productivity and location.

Examination: Part of 1 paper of 3 hours.

MONEY AND BANKING

For 2nd-year students reading for the degrees of Bachelor of Arts in special or combined studies in economics or Bachelor of Commerce or Bachelor of Science with Honours in agricultural economics.

One hour a week.

A course covering basic monetary theory, the structure of the financial system of the United Kingdom, and the implementation of monetary policy.

Examination: Part of a 3-hour paper (Industry, social history and money) taken at the end of the 3rd year.

PUBLIC FINANCE

For 2nd-year students reading for the degrees of Bachelor of Arts in special or combined studies in economics, or of Bachelor of Commerce, or of Bachelor of Science with Honours in agricultural economics.

One hour a week.

A course covering the basic theory of public finance and the main features of the United Kingdom budgetary system.

METHODS OF ECONOMIC AND SOCIAL STATISTICS

For 2nd- and 3rd-year students reading for the degrees of Bachelor of Arts in special studies in economics or of Bachelor of Commerce, or 3rd-year students reading for the degree of Bachelor of Science with Honours in agricultural economics.

One hour a week.

Probability theory, standard probability distributions and their application to sampling problems, the classical tests of significance.
Multivariate analysis and applications in the social sciences.
Elements of the theory of testing hypotheses and of statistical inference.
Time-series analysis.
Examination: 1 paper of 3 hours covering Economic statistics 1 and 2.

ENGLISH ECONOMIC HISTORY 1066-1914

For 1st-year students reading for the degrees of Bachelor of Arts in special studies in economics and Bachelor of Science with Honours in agricultural economics, and for 2nd-year students reading for the degree of Bachelor of Arts in combined studies and in special studies geography.
Two hours a week.

An outline course covering the period between the Norman Conquest and the end of the First World War.
Examination: 1 paper of 3 hours.

RECENT ECONOMIC HISTORY

For 2nd-year students reading for the degree of Bachelor of Arts in special studies in economics and 3rd-year students reading for the degrees of Bachelor of Arts in combined studies, economics and history or economic history and geography, or Bachelor of Science with Honours in agricultural economics.

*The British Economy since 1914*

One hour a week.

This course examines the impact of the two world wars upon the British economy and the subsequent periods of reconstruction. The analysis of the inter-war years includes a discussion of the trade cycle, economic policy, foreign trade, population, national income, industry and labour.

*American Economic History: An Outline*

One hour a week.

INDUSTRIAL RELATIONS

For 2nd-year students reading for the degree of Bachelor of Arts in special studies in economics or economics with statistics, in combined studies economics and sociology, economics and politics, or (as an optional subject with industry) economics and history; for the degree of Bachelor of Commerce, or for the degree of Bachelor of Science with Honours in agricultural economics, and as an optional subject for the degree of Bachelor of Arts in special studies in sociology or politics or Bachelor of Science in the Faculty of Technology.
One hour a week.

A general introduction, including the structure and working of unions and employers' organisations, the theory and practice of wage-determination, problems of wage and income policy, labour relations and productivity, strikes and disputes.

THE STATE AND INDUSTRIAL RELATIONS

For 3rd-year students reading industrial relations as an optional subject for the degree of Bachelor of Arts in special studies in sociology or as an optional subject for the degree of Bachelor of Science in the Faculty of Technology.

One hour a week.

An examination of the activities of the state in relation to labour in both legislative and non-legislative fields, comprising a comprehensive survey of labour legislation in Britain with some reference to other countries, and to the organisation and work of the Ministry of Labour. Industrial relations in the nationalised industries.

TRADE UNIONISM AND COLLECTIVE BARGAINING

For 3rd-year students reading industrial relations for the degree of Bachelor of Arts in special studies in sociology or as an additional subject for the degree of Bachelor of Science in the Faculty of Technology.

One hour a week.

An examination of the organisation of trade unions, the Trades Union Congress and workshop bodies. The functions of trade unionism and the methods employed. Strikes, collective bargaining, joint consultation and political action.

APPLIED ECONOMICS FOR TECHNOLOGISTS

For 1st-year students reading for the degree of Bachelor of Science or for diplomas in the Faculty of Technology.

A course designed to illustrate some of the ways in which industrial and commercial considerations influence the use of technical knowledge in industry.

The course is divided into two sections:

*Applied Economics A*

One hour a week.

For students in the departments of mechanical engineering, gas engineering and fuel science, ceramics, and applied mineral sciences who are not proceeding to take industrial relations.

Examination: 1 paper of 3 hours.

*Applied Economics B*

One hour a week.

For students in the departments of civil or electrical engineering who have the option to proceed to take industrial relations. Also for students taking the course for the diploma in textile industries.

Examination: 1 paper of 3 hours.

ACCOUNTANCY 1

For 1st-year students reading for the degree of Bachelor of Commerce with accountancy or law as a principal subject.

Compound interest calculations and elementary business and financial problems.

The mechanics of double entry book-keeping and the preparation of accounting statements, with particular consideration of specific types of accounts, including sole traders, partnerships, and companies.
The uses, interpretation and limitations of accounting statements.
Examination: 1 paper.

ACCOUNTANCY 2 and 3
For 2nd- and 3rd-year students reading for the degree of Bachelor of Commerce with accountancy or law as a principal subject.
Two hours a week.
Preparation of departmental and branch accounts, the accounts of limited companies, group accounts, economic problems in relation to accountancy.

*Cost Accounting*
One hour a week.
Accounting data for controlling costs and efficiency, and for pricing and output decisions. The meaning of 'cost.' Accounting for materials, labour and overheads. Job and process costing. Standard costing and budgetary control.
Break-even analysis, marginal costing and management control through profit planning. The use of costing data in solving managerial problems concerning plant replacement, substitution of productive factors, abandonment of production; and pricing.

*Auditing*
One hour a week.
An outline of auditing practice and its objects; vouching, checking of books of account, verification of assets and liabilities.
Some consideration of the law affecting the duties and responsibilities of auditors.
The use of auditing techniques as a check on managerial efficiency.

*Principles of Taxation*
One hour a week.

SOCIAL ACCOUNTS SEMINAR
For 3rd-year students reading for the degree of Bachelor of Commerce with accountancy as the principal subject.
One hour a week.
A consideration of economists' and accountants' views on capital, income and other concepts of significance in the preparation of social accounts, the value of such accounts, and the methods that have been followed in the preparation of the social accounts of the United Kingdom.

INDUSTRIAL MANAGEMENT I
For 1st-year students reading for the degree of Bachelor of Arts in textile design or textile management, for the degree of Bachelor of Commerce with textile industries as a principal subject, or for the degree of Bachelor of Science or for diplomas in the Faculty of Technology.

*Introduction to Industrial Management*
One hour a week.
The activities of industry (within the firm) and of industrial management, from the point of view of resources and of resource allocation as a technical and economic problem. Examples of resource allocation from line and jobshop production. Decision-making and information flows, such as production planning and control.
Examination: 1 paper of 3 hours.

*Elementary Sampling Statistics*
One hour a week.
The course provides a simple introduction to statistical methods and outlines some of their applications in industry. Topics discussed include probability, frequency distributions and elementary variance and regression analysis. Special attention is paid to showing the relevance of these to quality control, acceptance sampling, investigation and experimentation in industry.
Examination: 1 paper of 3 hours.

INDUSTRIAL MANAGEMENT II
For students who have completed Industrial management 1.

*Management Economics*
Thursday 10 to 12.
This course presents an analysis of the overall economic problem of the management of the business firm by means of a consideration of the capital budgeting decision.
Topics: the economist's theory of the firm, assumptions and reality; measurement of the worth of a business investment; measurement of the cost of capital to the individual firm; taking account of the presence of uncertainty; forecasting the returns from an investment.
Examination: 1 paper of 3 hours.

*Field Project*
Wednesday 10 to 11.
The course is based on an inquiry into the activities of the firm. Students working together in groups examine what a firm does; what its organisation structure is; the markets in which it operates; and the forces—internal and external—which influence its activity. The project work is prefaced by a series of 6 or 8 lectures and discussions on the forces that operate in firms and methods of inquiry. Projects start in the middle of the first term and end in the middle of the second term.
Examination: Assessment of field work report, and oral examination. Normally the report is due and the oral examination takes place before the Easter vacation.

INDUSTRIAL MANAGEMENT III
The course consists of Social and Industrial psychology and *either* Quantitative methods in decision-making *or* Labour in industry.

*Social and Industrial Psychology*

Monday 2-4 (seminar).

The purpose of the course is to give students an appreciation of some of the human problems of an industrial society. Individual and group behaviour; conformity and creativity; formal and informal organizations; bureaucracies; the impact of technology on social structure; psychological processes important in selection and advertising. During the year a study is made of the class as a group, in illustration of many of the points covered in the lectures.

Examination: 1 paper of 3 hours.

*Either:*

*Quantitative Methods in Decision-Making*

Tuesday 12-1.

A course in the basic principles and methodology of Operational Research, with emphasis on the relevance to industrial problem-solving and decision-making. Topics include: model and problem formulation, optimisation concepts, statistical decision theory, time series and forecasting, linear programming, network analysis. Primarily for students with G.C.E. 'A' level mathematics.

Examination: 1 paper of 3 hours.

*Or:*

*Labour in Industry*

Tuesday 12-1.

A sociological approach.

Examination: 1 paper of 3 hours.

TEXTILE ECONOMICS

For 1st-year students reading for the diploma in textile industries.

Two hours a week.

This course is in two parts. One deals with the history, organisation and structure, and economic problems of the textile industry, with particular reference to wool textiles; the other with industrial relations with reference to the textile industries.

## SOCIAL STUDIES

INTRODUCTION TO SOCIOLOGY 1(a)

For 1st-year students reading sociology as part of a special or combined studies scheme.

Tuesday 11 to 12 and Wednesday 10 to 11.

The comparative study of the major social institutions—the family, marriage, and kinship; economic organisation; social differentiation; social control; and ritual. The development of sociology in the 19th and 20th centuries, and its position today. Some problems arising from the application of scientific method to the study of human society, and some examples of attempts to overcome them in practice.

POLITICS 1

*The Government of Great Britain* 1 (a)

For 1st-year students reading for the degree of Bachelor of Arts in special or combined studies, or for the degree of Bachelor of Commerce.

Tuesday 2 to 3.

An outline of British constitutional history; general principles of the constitution; parliament, the cabinet, the Crown, government departments and the civil service, the courts of law, political parties and the electoral system, local government.

*Social and Political History of Modern Britain* 1 (b)

A study of selected aspects of social change in Britain during the 19th and 20th centuries against the background of industrial and technological development.

The demographic transition, urbanisation and its social consequences, changes in occupation structure, income distribution and property ownership. Social class and related institutions; social selection and social mobility arising out of the development of the education system. Changing social needs and the evolution of social policies, war and social provision.

CONTEMPORARY SOCIOLOGICAL THEORY

For students reading sociology as part of a special or combined studies scheme.

Four terms beginning in the first term of the second year.

The action frame of reference. Role relations, institutionalization. Primary groups, formal organisations and institutional systems. Social structure. The classification of economic, political, stratification and kinship systems. Generations. Language; literacy and non-literacy; oral and media systems of communication; ideas, beliefs and values. Morals and religion. Social control, order, conflict and deviance. Social and cultural change; innovation and diffusion; differentiation; collective behaviour and socio-cultural change. Classification of total societies.

COMPARATIVE SOCIAL INSTITUTIONS

For students reading sociology as part of a special or combined studies scheme.

Four terms beginning in the first term of the second year.

The aim of this course is to illustrate by means of actual instances the working of the major social institutions, including the family, marriage and kinship, social differentiation, social control, and ritual, in a widely contrasting range of societies. The selected instances are drawn from prehistoric and historic societies, primitive and peasant societies in traditional conditions and in transition, and modern industrial society.

METHODS OF SOCIAL INVESTIGATION

For 2nd-year students reading sociology as part of a special or combined studies scheme. Four terms beginning in the first term of the second year.

One hour a week.

The methods used in social investigation. Collection of data. Censuses and surveys. Processing of data. Elementary statistical methods, and the simplest ideas underlying the theory of statistical inference. The application of statistics to sociology. The interrelation of theory, methodology and methods in the research situation. Research design; models and formalisation; choice of appropriate methods, measurement indices and tests. Types of design and the logic of procedure and analysis; surveys, panel method, experimental studies, organizational analysis and qualitative methods. Common methods used, in the context of recent research—including questionnaire methods, interviewing, scaling techniques and systematic observation. The handling of data and modern methods of processing and analysis. The feedback of research into theory.

MODERN BRITAIN

For 2nd- and 3rd-year students reading sociology as part of a special or combined studies scheme. Four terms beginning in the first term of the second year.

A critical enquiry into selected aspects of contemporary social organisation in Britain, with particular reference to the historical process of individual and public protest, pressure group activity, parliamentary action and the social results of administrative reform. There will be discussion of the relationships between the material-legal framework and the structure of society. Selected topics for study will include the welfare state, the family, education, town planning, mass communication media, racial and ethnic minorities. It is essential that students should be familiar with the outlines of nineteenth- and twentieth-century social history.

POLITICAL AND SOCIAL THEORY

For 2nd and 3rd-year students reading sociology as part of a special or combined studies scheme. Four terms beginning in the first term of the second year.

A study of the ' great issues ' in political and social philosophy considered by topic and in connection with a number of classical texts, leading to an examination of the interaction between political theory and political practice in the contemporary world. Political and social philosophy as a form of enquiry; methods, types of theory, standards of judgment and verification. Concepts of the state, the state and the individual, the state and other associations. Relations between states. Freedom and responsibility. Concepts of power, authority and political obligation; rights; justice and equality. Theories of progress and change. Systems of political doctrine; nationalism, liberal democratic doctrines, conservatism, fascism, socialism and related doctrines. Theories of the ' mass society ' and ' elitist ' theories. Language and the study of politics. Human nature and politics; the problem of irrational behaviour.

SOCIAL ADMINISTRATION

For students reading sociology as part of a special or combined studies scheme.

The development of the social services in Great Britain from the nineteenth century to the present day. Influences affecting changing attitudes to the role of the state in promoting community and individual welfare. The change from Poor Law to Welfare State. Social policy today. Central and local government administration, and the role of voluntary organisations in the social services. The economics of welfare with international comparisons. The pattern of social services to-day to meet basic needs with special emphasis on income maintenance, health, housing and education. The needs of special groups such as the aged, the deprived child and the handicapped. An introduction to the comparative study of social security.

CRIMINOLOGY

For students reading the subject as part of a special or combined studies scheme.

The nature of criminal law. Criminality and other forms of anti-social behaviour. Differences in crime between different social groups. Theories of the causation of crime. The history and theory of punishment. Modern penal systems, with special reference to Great Britain, the U.S.A. and Scandinavia. Prediction techniques and recidivism. Crimes of violence, sexual offences. Crimes against property.

DEMOGRAPHY

Optional for students reading the subject in special or combined studies schemes.

It is essential that students taking this course have reached 'O' level standard in mathematics, and it is desirable that they should have studied the subject to 'A' level.

An introduction to demographic analysis and the study of human populations. The main sources of published population data. Death rates. Standardization. The life table. Gross and net nuptiality tables. The analysis of fecundity and fertility. The stationary and stable populations. The growth of world population since 1650, and associated changes in population structure. Differential fertility. Problems of high fertility areas. Social and economic implications of demography. Population theories and policies.

SOCIAL STATISTICS

Optional for students reading the subject as part of a special or combined studies scheme.

Students attending this course will be expected to be familiar with the elements of the differential and integral calculus.

Elementary statistical theory; moments and cumulants. The binomial, Poisson and normal distributions, and their application to simple sampling problems. Tests of significance. Linear regression and correlation. The standard errors of regression and correlation coefficients. The application of statistical methods to social problems and surveys. Difficulties of sampling, and different sampling methods. Interviews and questionnaires. The design of social experiments. Statistical methods used in empirical studies. History of social statistics.

SOCIAL ANTHROPOLOGY

Optional for students reading for the subject as part of a special or combined studies scheme.

First term of the third year.

Social anthropology. Anthropology and sociology. Functionalism and evolutionism. The history of anthropological theory. Theory of kinship and descent. Political organisation. Magic and religion. The theories of social change in social anthropology.

POLITICS II

*British and Commonwealth Government*

For students reading politics for the degree of Bachelor of Arts in special or combined studies.

A study of the political systems of the older Commonwealth countries, followed by a comparative treatment of selected subjects, e.g. electoral systems, parties, legislatures, cabinets, public services, local government institutions, etc., in British and Commonwealth governments.

*Modern Foreign Governments*

For students reading politics for the degree of Bachelor of Arts in special or combined studies.

A comparative study of the main features of the political institutions of the United States, France, West Germany and the Soviet Union. A detailed comparative study of political institutions and problems of government, by topic; constitutions, electoral systems, parties and pressure groups, presidential and cabinet systems, parliaments, civil service organisation, local government, public enterprise, judicial control of public authorities, etc.

INTERNATIONAL RELATIONS

For students reading for the degree of Bachelor of Arts in special or combined studies.

A study of the nature and action of major forces that account for the dynamic quality of international relations. The changing ingredients of national power; the growth of industrialism and an international economy; the nationalist idea and other ideologies affecting relations between peoples. Methods of limiting conflict and regulating change, with particular reference to the development of international organisations.

THE GOVERNMENT OF THE U.S.A.

For students reading politics for the degree of Bachelor of Arts in special or combined studies.

The development of the Constitution; the Federal system; the Presidency, Congress, the Supreme Court. The Administration. Political parties, and the electoral process. Issues in American national politics. State governments. Local government and administration.

THE GOVERNMENT OF INDIA AND PAKISTAN

For students reading politics for the degree of Bachelor of Arts in special or combined studies.

British rule and the transition to independence; constitution-making; the Indian constitution; problems of federalism; political development from 1947; the interaction between modern political forms and traditional social institutions; the political and administrative problems involved in economic development and planning.

BRITISH CONSTITUTIONAL HISTORY FROM 1600

For students reading for the degree in political studies.

This course traces the development of the British constitution from the limited monarchy of the seventeenth century to the constitutional democracy of the twentieth. It will consider the withdrawal of the Crown, the extension of the franchise, the emergence of parties, the Cabinet and Prime Minister, the expansion of executive action and the consolidation of civil liberties.

DEVELOPMENT OF SOCIOLOGICAL THEORY

Optional for students reading sociology as part of a special or combined studies scheme.

The philosophy of history in the epoch of the Enlightenment. The idea of a science of society. Socialism, conservatism and social theory. A comprehensive systematic study of the social thought and wider implications of the work of K. Marx, E. Durkheim and Max Weber. The theory of mass society and of elites. Contemporary American social theory with special reference to T. Parsons.

URBAN STUDIES

Optional for the degree of Bachelor of Arts in special studies in sociology.

Urbanism in the classical world, in mediaeval Europe, China and Islam. British boroughs and corporations before and after reform. Industrial urbanism, the social and economic structure of large cities and conurbations. Urban demography and migration. Modern cities in Asia and Africa. Techniques and objectives of studies of urban society. The urban environment and its impact on basic social institutions. Small groups in village, town and city. The ecological concept of community and community studies.

SOCIOLOGY OF RELIGION

Optional for students reading the subject as part of a special or combined studies scheme.

The nature of sociology of religion and its relation to other disciplines. The major sociological theories of religion. The development of Christianity in the West, compared with other religions. Religious organisation and movements, authority and social change. Religion in industrial society; religion and capitalism. Religion and the class and status structures; the social ethic. The Church as a social institution, religious leadership; religion as an occupation. Integration and schism, co-operation and conflict.

POLITICAL SOCIOLOGY

Optional for students reading the subject as part of a special or combined studies scheme.

One hour a week.

Relation between political action and social structure; relation between politics and sociology. Social stratification and political power. Social movements and economic development. The political aspects of social change; the sociology of revolutions. Political parties; their social basis, organisation and ideology. Modern political movements. The study of voting behaviour.

SOCIOLOGY OF THE FAMILY

Optional for students reading for the degree of Bachelor of Arts in special studies in sociology.

A study of marriage and the family in various cultures, contemporary and earlier. The relation of the family to the community, to other social institutions and to social change. Divorce, social policy and the family. Family structures, relationships and problems.

ELEMENTS OF HUMAN GENETICS

For 2nd-year students reading sociology.

Eight lectures in the first term.

Introduction to genetical theory through a study of cell division, chromosomes, genes and gene mutations, Mendel's work. Mendelian genetics and exceptions to straighforward Mendelism illustrated by reference to inheritance in man. Radiation genetics. Eugenics.

# THE FACULTY OF LAW

## ORDINANCE IV

### DEGREES IN LAW

1. The degrees in law shall be:

Bachelor of Laws (LL.B.)
Master of Laws (LL.M.)
Master of Laws in Commercial Law (LL.M. Com.)
Doctor of Philosophy (Ph.D.)
Doctor of Laws (LL.D.)

### THE DEGREE OF BACHELOR OF LAWS

2. The degree of Bachelor of Laws shall be conferred either as an ordinary degree or as a degree with Honours.

3. All candidates for the degree of Bachelor of Laws shall be required to have passed the examination for matriculation except such as may have been exempted therefrom, and thereafter to have pursued approved courses of study for not less than three academic years; provided that graduates of the University other than graduates in law or, subject to the approval of the Senate, graduates of other approved universities may proceed to the final examination for the degree of Bachelor of Laws after pursuing approved courses of study in law for not less than two years.

4. Every candidate for the degree of Bachelor of Laws, whether ordinary or with Honours, shall be required to attend approved courses of study, and to pass the prescribed examinations.

5. The prescribed examinations shall ordinarily be held in June of each year.

6. All candidates shall be required, before presenting themselves for a prescribed examination, to furnish certificates testifying that they have regularly attended the course of study approved for such examination. Some modification of the amount of attendance required may, in exceptional cases, be made by the Senate.

7. The following provisions shall apply to the degree of Bachelor of Laws with Honours:

(a) Every candidate for the degree of Bachelor of Laws with Honours shall be required to present himself for examination not later than the end of the third or fourth academic year from the time when he has entered upon one of the courses of instruction approved by the University for such degree unless he shall present a medical certificate of illness satisfactory to the Senate.

(b) Candidates who have passed the final examination for the ordinary degree of Bachelor of Laws may, on furnishing certificates of having attended the approved course or courses for the degree with Honours

which are not approved courses for the ordinary degree, present themselves for examination for the degree of Bachelor of Laws with Honours.

(c) No candidate for the degree of Bachelor of Laws with Honours shall be admitted more than once to examination in the Honours school of law, but students who have passed the final examination in any of the other Honours schools of the University may be admitted to the final examination in the Honours school of law after the expiration of two years, on presenting certificates of having attended, during the period in question, courses approved by the University.

8. Candidates who have passed the examination for the degree of Bachelor of Laws with Honours may be awarded:

(a) the degree of Bachelor of Laws with first-class Honours;
*or* (b) the degree of Bachelor of Laws with second-class Honours, division (i);
*or* (c) the degree of Bachelor of Laws with second-class Honours, division (ii);
*or* (d) the degree of Bachelor of Laws with third-class Honours;

each class being arranged in alphabetical order.

9. Candidates who do not merit the award of an Honours degree may be excused the whole or such part of the examination for the ordinary degree as the Senate may determine.

[See also the regulations on page 466.]

## THE DEGREE OF MASTER OF LAWS
## THE DEGREE OF MASTER OF LAWS IN COMMERCIAL LAW

10. The degree of Master of Laws or the degree of Master of Laws in Commercial Law may be conferred, on payment of the proper fee and subject to the conditions laid down in the following articles, upon Bachelors of Laws who have *either* followed an approved course of advanced study *or*, in exceptional circumstances, prosecuted research on an approved subject, and who thereafter satisfy the examiners for the degree.

*Graduates of the University*

11. Except with the special permission of the Senate, given on the recommendation of the Board of the Faculties of Arts, Economic and Social Studies and Law, graduates must, before their acceptance as candidates for either degree, have obtained the degree of LL.B. with Honours.

12. Candidates proceeding to either degree *by examination* after a course of advanced study shall be required to fulfil the following conditions:

(a) to be registered as students of the University;
(b) to be accepted by the Senate as candidates for the degree;
(c) to pursue a course of advanced study in the University for a period of not less than one year;
(d) to present themselves for a written examination and, if the examiners so decide, an oral examination in the field of their studies.

13. In exceptional circumstances, a candidate may, on the recommendation of the Board of the Faculties of Arts, Economic and Social Studies and Law, be allowed to proceed to the degrees by the presentation of a dissertation satisfactory to the Senate on a subject approved by the Board of the Faculties of Arts, Economic and Social Studies and Law.

14. Candidates proceeding to either degree *by dissertation* shall fulfil the following conditions:

(a) to pursue a course of advanced study or research under the supervision of the head of the department of law or of a member of the University staff appointed by the Senate on his recommendation, for a period of not less than two years;

(b) to attend such course or courses of tuition at the University as the Senate, on the recommendation of the Board of the Faculties of Arts, Economic and Social Studies and Law may require;

and, in addition, may be required at the end of the first year of study and before being allowed to proceed with the course *either* to pass a qualifying examination on the subject or subjects prescribed under (b) above; *or* to provide other evidence acceptable to the Board of the Faculties of Arts, Economic and Social Studies and Law that their work has been satisfactory.

*Graduates of other universities*

15. The degree of Master of Laws or the degree of Master of Laws in Commercial Law may be conferred, on payment of the proper fee, upon graduates in law of other approved universities who have obtained first-class or high second-class honours, or upon holders of an equivalent qualification or of a degree in law of standing higher than bachelor, and who have *either* followed an approved course of advanced study *or*, in exceptional circumstances, prosecuted research on an approved subject and who thereafter satisfy the examiners for the degree, subject to the conditions laid down in the following articles.

16. All candidates shall be required to fulfil the following conditions:

(a) to be registered as students of the University;

(b) to be accepted by the Senate as candidates for the degree;

(c) to pursue a course of advanced study or research in the University for a period of not less than two academic years; provided that candidates whose qualifications are deemed sufficient, may be allowed to proceed to the degree *by examination* after they have followed, for a period of not less than one year, a course of advanced study in the University.

17. Except in the case of candidates allowed under the provisions of Article 16, paragraph (c) to proceed to the degree by examination after a period of not less than one year, all candidates shall be required to attend, during their first year of study, such course or courses of tuition in the University as the Senate, on the recommendation of the Board of the Faculties of Arts, Economic and Social Studies and Law may require, and at the end of that year, and before being allowed to proceed with the course, to pass a qualifying examination.

18. Candidates proceeding to the degree by examination shall, at the end of the course, present themselves for a written examination and, if the examiners so decide, an oral examination in the field of their studies.

19. In exceptional circumstances, a candidate may, on the recommendation of the Board of the Faculties of Arts, Economic and Social Studies and Law, be allowed to proceed to the degree by the presentation of a dissertation satisfactory to the Senate on a subject approved by the Board of the Faculties of Arts, Economic and Social Studies and Law.

20. Candidates proceeding to either degree by *dissertation* shall fulfil the following conditions:

(a) to pursue a course of advanced study or research under the supervision of the head of the department or of a member of the University staff appointed by the Senate on his recommendation, for a period of not less than two years;

(b) to attend such course or courses of tuition at the University as the Senate, on the recommendation of the Board of the Faculties of Arts, Economic and Social Studies and Law may require:

and, in addition, may be required, at the end of the first year of study and before being allowed to proceed with the course, *either* to pass a qualifying examination on the subject or subjects prescribed under (b) above *or* to provide other evidence acceptable to the Board of the Faculties of Arts, Economic and Social Studies and Law, that their work has been satisfactory.

*Examination results and re-examination*

21. The names of candidates who have satisfied the examiners shall be published in alphabetical order in such a form as to distinguish the degree which each has been awarded. *Distinction* may be awarded for work of exceptional merit at the discretion of the examiners.

22. Any candidate proceeding to the degree by a course of advanced study and examination, who does not pass the examination at the first attempt, shall be allowed to present himself for re-examination on one further occasion only, in a subsequent year, provided that

(a) he shall present himself for re-examination in all the papers and may be required to submit himself for a further oral examination

(b) he shall not be eligible for the award of the degree with distinction.

## THE DEGREE OF DOCTOR OF PHILOSOPHY

[The degree of Doctor of Philosophy is governed by ordinance II, articles 50 to 52 and relevant regulations which are set out on pages 299 and 310.]

## THE DEGREE OF DOCTOR OF LAWS

23. The degree of Doctor of Laws shall be conferred by the University upon graduates of the University who shall be deemed by the Senate, after considering a report from one or more of the Boards of Faculties, to have distinguished themselves by special research or learning; provided that the Senate may in such cases as it shall think fit, after considering a report from

one or more of the Boards of Faculties, also require candidates to pass such an examination as it may from time to time determine.

24. A graduate of the University may make application for the degree of Doctor of Laws in the sixth or any subsequent year from the date of graduation.

25. Such application shall be made in writing to the Registrar, and shall contain a full statement of the grounds on which the claim for the degree is based, together with one or more copies of any thesis, whether in print or in manuscript, which the applicant may desire to submit in support of the application.

[See also the regulations on page 469.]

# REGULATIONS

Candidates should note that in order to qualify for admission to a scheme of study for a first degree in the University, they must satisfy both a *General Requirement* and a *Course Requirement*. For information regarding the *General Requireuent*, for purposes of matriculation, candidates should write to The Secretary, Joint Matriculation Board, Manchester 15. The *Course Requirement* is set out at the beginning of the regulations for each degree scheme of study in the Faculty of Law.

**LAW:** There are two schemes of study each extending over a period of three years and leading to the degree of Bachelor of Laws (LL.B.); under one scheme the degree may be conferred with Honours and under the other as an Ordinary degree.

## *Course Requirement*

For admission to either scheme of study passes in two approved subjects at advanced level are required. These passes may be in any approved subject.

### THE ORDINARY DEGREE OF BACHELOR OF LAWS

1. Every candidate, subject to concessions to graduates under article 3 of Ordinance IV, shall be required after passing the examination for matriculation or obtaining exemption therefrom, to attend courses as follows:

(a) In his first year of study, courses on:
- (i) Constitutional law
- (ii) The English legal system
- (iii) Roman law
- (iv) The elements of the law of contract
- (v) The elements of the law of torts

(b) In his second and third years of study, courses on:
- (i) Contract
- (ii) Torts
- (iii) Equity
- (iv) Criminal law
- (v) Legal history
- (vi) Jurisprudence
- (vii) The land law

2. Every candidate shall, subject to the concessions to graduates above mentioned, satisfy the examiners in the following prescribed examinations:

(a) After the completion of his first year of study he shall be examined as follows:
- (i) In constitutional law (1 paper)
- (ii) In the English legal system (1 paper)
- (iii) In Roman law (1 paper)
- (iv) In the elements of the law of contract (1 paper)
- (v) In the elements of the law of torts (1 paper)

(b) After the completion of his third year of study he shall be examined as follows:
  (i) In the law of contract (1 paper)
  (ii) In the law of torts (1 paper)
  (iii) In equity (1 paper)
  (iv) In criminal law (1 paper)
  (v) In legal history (1 paper)
  (vi) In jurisprudence (1 paper)
  (vii) In the land law (1 paper)

3. No candidate shall be permitted to enter upon the second year of his course until he has satisfied the examiners in the examination prescribed at the end of his first year of study.

4. After the second year of study, students will be required to take a departmental examination in the law of torts, equity, contract, the land law and criminal law.

5. Candidates for the final examination will be required to present themselves for examination or re-examination in all the prescribed subjects in a single examination at the same time. Except with the special permission of the Senate they will not be permitted to present themselves for examination separately in any one of the papers of the final examination.

## THE DEGREE OF BACHELOR OF LAWS WITH HONOURS

6. In addition to the approved courses for the ordinary degree, a candidate for Honours will also be required to attend courses in public international law and either private international law or company law.

7. In addition to the prescribed papers for the ordinary degree, a candidate for Honours will also be required to take an examination in public international law (1 paper) and in either private international law or company law (1 paper).

## THE DEGREE OF MASTER OF LAWS

8. The examination for the degree of Master of Laws shall consist of five papers, one of which shall be an essay on a legal topic. The remaining four papers shall be selected by the candidate, subject to the approval of the head of the department of law, as follows:

(a) At least *one*, but not more than *four*, papers selected from the following*:
  Common law
  Equity
  Comparative law
  Evidence, practice and procedure
  Jurisprudence
  Personal property

*Not all these subjects will necessarily be offered every year.

(b) Not more than *three* papers selected from the following*:

Company law
Conveyancing
Construction and interpretation
Criminal law
Family law
Industrial law
Legal history
Local government and administrative law
Mercantile law
Principles of tax law
Private international law
Public international law
Roman law

(c) Not more than *two* papers selected from the following*:

Criminology
Economics
Ethics
Forensic medicine
Government
Logic
Psychology

## THE DEGREE OF MASTER OF LAWS IN COMMERCIAL LAW

9. The examination for the degree of Master of Laws in Commercial Law shall consist of five papers, one of which shall be an essay on a legal topic. The remaining four papers shall be selected by the candidate, subject to the approval of the head of the department of law, so that at least *one* and not more than *two* are selected from each of the following groups:

Group A* Sale of goods and hire-purchase
Agency
Banking law and negotiable instruments
The law of insurance (other than marine)
Industrial law
The law of bankruptcy and deeds of arrangement

Group B* Company law
Law of investment
Partnership and law of unincorporated associations
Principles of monopolies and restrictive practices law
Principles of tax law
Patent law and copyright law
In relation to all subjects of this group candidates will be required to attend a course of instruction on the evaluation of accounts and balance sheets.

*Not all these subjects will necessarily be offered every year.

Group C* Law of international sales and commercial credits
Commercial aspects of private international law
Commercial aspects of public international law
Law of international carriage
Law of marine insurance.

## THE DEGREE OF MASTER OF LAWS

## THE DEGREE OF MASTER OF LAWS IN COMMERCIAL LAW

10. A candidate must not submit as his dissertation one for which a degree has been awarded in the University of Leeds or in any other university, or which is under consideration for the award of a degree in another university; but he will not be precluded from incorporating in his dissertation any part of such work provided that he states his desire to do so at the time of his application for acceptance as a candidate and in his dissertation itself indicates the part of the work so incorporated. A copy of the dissertation approved for the degree will be retained in the University Library.

## THE DEGREE OF DOCTOR OF LAWS

11. A candidate shall not be permitted to submit in chief or sole support of his application for the degree a thesis for which a degree has been awarded in this or any other university, or which is under consideration for the award of a degree in another university; but he shall not be precluded from submitting in additional support of his application a thesis for which a degree has already been awarded or from incorporating [in whole or in part] such work in the thesis submitted provided he clearly indicates the work thus submitted or incorporated.

12. If the application be approved by the Senate, the degree may be conferred at the first convenient date thereafter. A copy of the thesis approved for the degree shall be retained in the University library. The application must be accompanied by the prescribed fee.

*Not all these subjects will necessarily be offered every year.

# COURSES IN THE FACULTY OF LAW

The following is a list of courses of lectures given in the Faculty of Law. The information concerning each course is given under four headings. The name of the course comes first, followed by the year of the student's career in which the course is normally attended and the days upon which and the times at which lectures are normally given. A brief indication is given of the content of the course and, where appropriate, particulars of the examination set on the subject matter.

Further details and lists of prescribed books with additional information concerning the relation of degree courses in law to professional qualifications and requirements will be found in the prospectus *The Faculty of Law*.

[NOTE:—The days and times of courses set out below are subject to change without notice.]

CONSTITUTIONAL LAW
First year; Thursday, 11 to 12.
A general survey of modern constitutional and administrative law and of English constitutional history; a comparative study of the constitutions of the principal member states of the Commonwealth of Nations and a study of the legal structure of the Commonwealth as a whole.
Examination: 1 paper.

THE ENGLISH LEGAL SYSTEM
First year; Monday, 2 to 4.
A survey of English legal institutions, their origins and development.
Examination: 1 paper.

ROMAN LAW
First year; Wednesday, 10 to 12.
A study of the sources of Roman law and of the general principles of Roman private law and procedure.
Examination: 1 paper.

THE ELEMENTS OF THE LAW OF CONTRACT
First year; Tuesday, 2 to 3 and Friday, 11 to 12.
An introductory study of the law of contract.
Examination: 1 paper.

THE ELEMENTS OF THE LAW OF TORTS
First year; Tuesday, 10 to 11.
An introductory study of the law of torts.
Examination: 1 paper.

CONTRACT
Second year; Monday, 11 to 12.
Continued study of certain aspects of the law of contract.
Examination: 1 paper.

CRIMINAL LAW
Second year; Tuesday, 9 to 10.
General principles of criminal law.
Examination: 1 paper.

TORTS
Second year; Wednesday, 11 to 12.
Continued study of certain aspects of the law of torts.
Examination: 1 paper.

EQUITY
Second year; Wednesday, 12 to 1.
Preliminary study of equity.
Examination: 1 paper.

SALE OF GOODS
Second year; Thursday, 12 to 1 (B.Com. students only).
A study of the law of sale of goods.
Examination: 1 paper.

LAND LAW
Second year; Tuesday, 2 to 3 and Thursday, 10 to 11.
Elements of the land law.
Examination: 1 paper.

FORENSIC MEDICINE
Second year; Monday, 12 to 1.
A study of the principles of forensic medicine of general interest to legal practitioners.

PRIVATE INTERNATIONAL LAW
Third year; Wednesday, 11 to 12.
General principles of private international law.
Examination: 1 paper (for *Honours* students only).

CONTRACT
Third year; Tuesday, 12 to 1.
Advanced study of certain aspects of the law of contract.
Examination: 1 paper.

TORTS
Third year; Friday, 11 to 12.
Advanced study of certain aspects of the law of torts.
Examination: 1 paper.

LEGAL HISTORY
Second year; Monday, 3 to 4 and Friday, 10 to 11.
Aspects of the history of English law.
Examination: 1 paper.

JURISPRUDENCE
Third year; Friday, 12 to 1.
Philosophy of law, sources of law and discussion of fundamental legal principles.
Examination: 1 paper.

EQUITY
Third year; Wednesday, 12 to 1.
Advanced study of equity.
Examination: 1 paper.

PUBLIC INTERNATIONAL LAW
Third year; Thursday, 12 to 1.
General principles of public international law.
Examination: 1 paper (for *Honours* students only).

LAND LAW
Third year; Thursday, 2 to 4.
Advanced study of the land law.
Examination: 1 paper.

AGENCY AND NEGOTIABLE INSTRUMENTS
Second year; at times to be arranged (B.Com. students only).
A survey of the law of agency and negotiable instruments.
Examination: 1 paper of one and a half hours.

LAW OF BANKRUPTCY
Third year; at times to be arranged (B.Com. students only).
The general principles of the law of bankruptcy.
Examination: 1 paper of one and a half hours.

COMPANY LAW
Third year; Monday, 3 to 4.
General principles.
Examination: 1 paper (for *Honours* students only).

# THE FACULTY OF SCIENCE

## ORDINANCE V

### DEGREES IN PURE SCIENCE

1. The degrees in pure science shall be:
Bachelor of Science (B.Sc.)
Master of Science (M.Sc.)
Doctor of Philosophy (Ph.D.)
Doctor of Science (D.Sc.)

### THE DEGREE OF BACHELOR OF SCIENCE

2. The degree of Bachelor of Science shall be conferred upon candidates who have fulfilled the requirements as to study and examinations; the degree shall be awarded with Honours to those candidates who attain a sufficiently high standard in the examinations upon which Honours may be awarded.

3. (a) Candidates who have passed the required examinations for the degree of Bachelor of Science may be awarded:
(i) the degree of Bachelor of Science with Honours, Class I
or (ii) the degree of Bachelor of Science with Honours, Class II, division (i)
or (iii) the degree of Bachelor of Science with Honours, Class II, division (ii)
or (iv) the degree of Bachelor of Science with Honours, Class III
or (v) the Ordinary degree of Bachelor of Science.

(b) The names of candidates who have passed the examination for the degree of Bachelor of Science shall be grouped so as to distinguish the main subject or subjects of the scheme of study in which each has passed: the names of candidates in each group shall be arranged alphabetically within the categories of (a) above.

4. All candidates for the degree of Bachelor of Science shall be required to have passed the examination for matriculation or to have obtained a certificate of exemption therefrom, and thereafter to have pursued approved schemes of study for not less than three academic years.

5. A candidate who has been awarded the degree of Bachelor of Science may not present himself a second time for an examination on the same scheme of study.

6. Except with the special permission of the Senate,
(a) Every candidate for the degree of Bachelor of Science shall be required to present himself for the final examination not later than the end of the fifth academic year from the time when he entered upon the first year of a four-year scheme of study approved by the University for the degree; or not later than the end of the fourth academic year from the time when he entered upon the second year of an approved scheme of study.

(b) A candidate failing in the final examination for the degree of Bachelor of Science will not be allowed to present himself for re-examination on more than one occasion.

(c) A candidate who does not pass the final examination at his first attempt will not be eligible for the award of the degree with Honours.

(d) No candidate will be allowed to present himself for re-examination for the degree of Bachelor of Science later than the end of the sixth academic year after his entry upon the approved scheme of study.

7. Candidates may proceed to the degree of Bachelor of Science by satisfactorily completing courses in one of the following schemes of study and passing the required examinations:

(a) schemes of study with one main subject selected from:

Anatomy
Bacteriology
Biochemistry
Biophysics
Botany
Chemistry
Geography
Geology
Mathematics
Pharmacology
Pharmacy
Physics
Physiology
Psychology
Zoology

(b) schemes of study with two main subjects (combined),* selected from:

Bacteriology—Biochemistry
Bacteriology—Botany
Bacteriology—Chemistry
Bacteriology—Zoology
Biochemistry—Botany
Biochemistry—Zoology
Botany—Chemistry
Botany—Zoology
Chemistry—Geology
Chemistry—History of Science and/or Philosophy
Chemistry—Mathematics
Chemistry—Physics
Chemistry—Physiology
Geography—Mathematics
Geology—Mathematics
Geology—Physics
Mathematics—History of Science and/or Philosophy
Mathematics—Physics
Mathematics—Statistics
Physics—History of Science or Philosophy
Physics—Statistics
Psychology—Statistics

8. Only candidates who pass the examinations prescribed for the fourth year of a four-year scheme of study will be eligible for the award of the degree with Honours.

9. Candidates who complete the courses prescribed for the first three years of a four-year scheme of study (or such courses as may, with the approval of the Board of the Faculties of Science and Technology, be substituted for them) and pass the necessary examinations, will be eligible for the award of the Ordinary degree of Bachelor of Science; candidates who complete these requirements after only two years of residence will be required to follow an approved course of study for a further year before graduating.

*Further schemes of study may be approved.

10. A candidate may transfer from one scheme of study leading to the degree of Bachelor of Science to another only in conformity with the provisions laid down by the Board of the Faculties of Science and Technology.

11. Subject to the provisions of the above articles, a candidate who has passed the examinations prescribed for the degree of Bachelor of Science with Honours in the Faculty of Science or in the Faculty of Technology may, with the permission of the Senate, given on the recommendation of the Board of the Faculties of Science and Technology, present himself for the examination for the degree of Bachelor of Science on one of the above schemes of study after attending an approved course of study in the University for not less than one further year.

## THE DEGREE OF MASTER OF SCIENCE

12. The degree of Master of Science may be conferred, on the payment of the proper fee, subject to the conditions laid down in the following articles, on candidates who have *either* prosecuted research on an approved subject *or* followed an approved course of advanced study, and who thereafter satisfy the examiners for the degree.

### *Candidates proceeding by research*

13. The degree of Master of Science may be conferred:

(a) Upon Bachelors in any Faculty of the University of not less than two years' standing*; provided that Bachelors of Science who have graduated with first-class or second-class Honours may be allowed, on the recommendation of the head of the department concerned, to proceed to the degree at an earlier date if they have prosecuted approved research under supervision in the University for a period of not less than *one calendar year*.

(b) Upon persons approved by the Senate who have been awarded, not less than two years before proceeding to the degree, an approved diploma in applied science in the University*.

(c) Upon graduates of other universities who have been accepted by the Senate as candidates for the degree and who have prosecuted approved research under supervision (normally by a member of the staff of the University), in the University for a period extending over not less than *six* terms, *or*, if they are members of the full-time teaching staff of the institution, at an institution approved in each case by the Senate for this purpose for a period extending over not less than *nine* terms, *or*, if they are members of the staff of industrial or scientific establishments geographically near to the University and approved by the Senate in each case, both at their place of work and in the University for a period extending over not less than *nine* terms; provided that candidates who have (i) graduated with first-class or second-class Honours in a subject regarded by the Senate as an appropriate preparation for the proposed research *or* (ii) been awarded an approved postgraduate diploma in a subject regarded by the

*Candidates proceeding under articles 13(a) or (b) are not required to register as students of the University unless they are receiving systematic supervision from a member of staff (but see note on page 481).

Senate as an appropriate preparation for the proposed research and achieved a sufficiently high standard in the examination, may be allowed, on the recommendation of the head of the department concerned, to proceed to the degree at an earlier date if they have prosecuted approved research under supervision in the University for a period of not less than *one calendar year*.

(d) Upon persons whose qualifications by study in an approved institution have been accepted by the Senate in lieu of a degree and who have prosecuted approved research under supervision (normally by a member of the staff of the University), in the University for a period extending over not less than *six* terms, or, if they are members of the full-time teaching staff of the institution, at an institution approved in each case by the Senate for this purpose for a period extending over not less than *nine* terms, or if they are members of the staff of industrial or scientific establishments geographically near to the University and approved by the Senate in each case, both at their place of work and in the University for a period extending over not less than *nine* terms; provided that candidates who have been awarded a postgraduate diploma in applied science of the University and achieved a sufficiently high standard in the examination may be allowed on the recommendation of the head of the department concerned and of the Board of the Faculties of Science and Technology to proceed to the degree after they have prosecuted approved research under supervision in the University in a subject for which the postgraduate diploma course previously followed is regarded by the Senate as an appropriate preparation, for a period of not less than *one calendar year*.

(e) Upon persons who are not graduates, or who have not passed the final examination for a degree of an approved university, but who have satisfied the Senate that their educational attainments are adequate and who have prosecuted approved research under supervision in the University for a period extending over not less than *nine* terms.

14. Candidates proceeding to the degree of Master of Science under the provisions of article 13 above, shall in all cases prosecute research on a subject approved by the Board of the Faculties of Science and Technology, and shall thereafter present to the Senate a thesis embodying the results of their research. They shall also attend such formal courses of instruction as may be prescribed by their head of department and present themselves for an examination (oral or written or both) if required.*

15. Candidates accepted under article 13(c), (d) or (e) may apply for permission from the Senate to spend a part of the period prescribed in acquiring a competent knowledge of a new subject, provided that the whole of the last three terms is devoted to postgraduate study and research.

* Subject to the approval of the Court at its meeting on 18 November 1964.

16. The names of candidates who have satisfied the examiners shall be arranged in alphabetical order, and distinction may be awarded for work of exceptional merit at the discretion of the examiners.

*Candidates proceeding by a course of advanced study*

17. The degree of Master of Science may be conferred:

(a) Upon graduates of any university who have been accepted by the Senate as candidates for the degree of Master of Science and who have followed an approved course of advanced study in the University for a period extending over not less than *six* terms; provided that candidates who have (i) graduated with first-class or second-class Honours *or* (ii) been awarded an approved postgraduate diploma in a subject regarded by the Senate as an appropriate preparation for the course of advanced study proposed and achieved a sufficiently high standard in the examination, may be allowed, on the recommendation of the head of the department concerned, to proceed to the degree if they have followed, for a period of not less than one calendar year, an approved course of advanced study in the University in a subject for which their first degree course is regarded by the Senate as an appropriate preparation.

(b) Upon persons whose qualifications by study in an approved institution have been accepted by the Senate in lieu of a degree, who have been accepted by the Senate as candidates for the degree of Master of Science and who have followed an approved course of advanced study in the University for a period extending over not less than *six* terms; provided that candidates who have been awarded a postgraduate diploma in applied science of the University and achieved a sufficiently high standard in the examination may be allowed on the recommendation of the head of the department concerned to proceed to the degree after they have followed an approved course of advanced study in the University in a subject for which the postgraduate diploma course previously followed is regarded by the Senate as an appropriate preparation, for a period of not less than *one calendar year*.

(c) In special cases upon Bachelors of Science of the University who have graduated in the School of Mathematics and who have, over a period of not less than two years, followed a course of study approved in each case by the Board of the Faculties of Science and Technology.

18. Candidates accepted under the provisions of article 17, paragraphs (a) and (b) shall follow one of the prescribed schemes of study approved by the Board of the Faculties of Science and Technology, and shall present themselves for the prescribed examinations.*

*Details of prescribed schemes of study and prescribed examinations are given on page 521.

19. Candidates accepted under the provisions of article 17, paragraph (c), shall present themselves for an examination which will consist of not less than four written papers on two branches of mathematics in which they have pursued an approved course of study, and, if the examiners so decide, an oral examination.

[Holders of the following approved diplomas will be considered for acceptance for the degree of Master of Science, subject to the approval of the Senate: the diplomas in agriculture, in civil engineering, in mechanical engineering, in electrical engineering, in mining engineering, in fuel and metallurgy, in gas engineering, in chemical engineering, in dyeing, in colour chemistry, in leather manufacture, in textile industries.]

20. The names of candidates who have satisfied the examiners shall be arranged in alphabetical order, and distinction may be awarded for work of exceptional merit at the discretion of the examiners.

[See also the regulations on page 481-2.]

## THE DEGREE OF DOCTOR OF PHILOSOPHY

The degree of Doctor of Philosophy is governed by Ordinance II, articles 50 to 52 and relevant regulations which are set out on pages 299 and 310.

## THE DEGREE OF DOCTOR OF SCIENCE

21. The degree of Doctor of Science is conferred by the University upon graduates of the University who shall be deemed by the Senate, after considering a report from one or more of the Boards of Faculties, to have distinguished themselves by their original contributions to science; provided that the Senate may, in such cases as it shall think fit, after considering a report from one or more of the Boards of Faculties, also require candidates to pass such an examination as it may from time to time determine.

22. A graduate of the University may make application for the degree of Doctor of Science in the sixth, or any subsequent year from the date of graduation.

23. If the application be approved by the Senate, the degree may be conferred at the first convenient date thereafter.

[See also the regulations on page 482.]

## DIPLOMA

24. Diplomas shall be granted by the University, in such subjects as the Council may from time to time determine, to students who pursue the course of study and pass the examinations prescribed.

25. The Council is empowered to make from time to time regulations under which such diplomas shall be awarded.

26. The award of diplomas under the provisions of this ordinance is delegated to the Senate.

[See also page 520.]

# REGULATIONS

## THE DEGREE OF BACHELOR OF SCIENCE

1. Candidates will not be admitted to schemes of study for the degree of Bachelor of Science unless they have satisfied the examination requirements for entry upon degree courses as determined by the Joint Matriculation Board.

2. Candidates must comply with any special requirements laid down in relation to the subjects they propose to study; for some of these previous knowledge of certain subjects may be required.

3. Candidates who have achieved a good performance in an Advanced level examination for the General Certificate of Education (or an equivalent examination) may be exempted from attendance at, and examination on, the corresponding courses prescribed for the first year of a scheme of study.

4. Candidates proceeding to the degree of Bachelor of Science by a scheme of study with one main subject are required, except in so far as they may be exempted from one or more first-year courses and examinations as provided in regulation 3 above, to pursue courses as prescribed in the ensuing section "Prescribed Schemes of Study for the Degree of Bachelor of Science".

5. Candidates proceeding to the degree of Bachelor of Science by a combined scheme of study are required, except in so far as they may be exempted from one or more first-year courses and examinations as provided in regulation 3 above, to pursue courses in two main subjects for four academic years, and *either* courses in two other subjects,* one for two academic years and one for one academic year, *or* courses in one other subject* for three academic years, and to pass the necessary examinations: with the permission of the Director of combined studies, a candidate selecting the second of these options may substitute for the course at third-year level in the third subject an approved equivalent additional course in one of the two main subjects. Except when repeating a course, candidates will not normally be permitted to take more than three courses in any academic year.

Exemption from the whole of the first year of a combined scheme of study (i.e. from three first-year courses) may be granted to candidates who have achieved a good performance in two of the corresponding Advanced level examinations for the General Certificate of Education (or an equivalent examination) and present satisfactory evidence of study of a further subject beyond the standard required for a pass at the Ordinary level examination for the General Certificate of Education.

6. The award of the degree at the end of the fourth year of a combined scheme of study will be assessed on the result of the fourth-year examinations which will cover the content of all the courses taken in the two main subjects after the first year of the scheme.

*These subjects may be in any Faculty.

7. To qualify for the award of the Ordinary degree of Bachelor of Science candidates must, except in so far as they may be exempted from one or more first-year courses and examinations as provided in regulations 3 and 5 above, satisfactorily complete all the courses and pass the necessary examinations* in the first three years of a prescribed scheme of study, except that:

(a) candidates who have failed required examinations on a course or courses at the second-year or third-year level, may, with the approval of the Board of the Faculties of Science and Technology, offer courses and examinations of equivalent standing in substitution for one or more of the courses and examinations prescribed for the second year or third year respectively of the scheme of study.

(b) candidates who, having been exempted from all courses and examinations in the first year of the scheme of study and having pursued courses for two academic years, have passed the prescribed examinations for the third year of the scheme of study but do not proceed to the fourth-year courses of the scheme, shall for one further year, pursue a course of study approved by the Board of the Faculties of Science and Technology and present themselves for the examinations thereon.

8. To qualify for the award of the Ordinary degree of Bachelor of Science candidates proceeding by a combined scheme of study must, except in so far as they may be exempted from one or more first-year courses and examinations as provided in regulations 3 and 5 above, complete all the courses prescribed for the first three years of the scheme of study† and pass the third-year examinations in two subjects and the second-year examinations in one other subject.

9. Candidates will not be permitted to present themselves for examination in any subject unless they have regularly attended the prescribed courses and performed the work of the class to the satisfaction of the head of the department concerned.

10. Candidates must present themselves for the departmental examinations arranged in connection with any course they may take.

11. The examinations will ordinarily be held in June of each year. Examinations on first-year courses will also be held in September, but, except with the special permission of the Senate, no candidate will be admitted to a September examination unless he has already presented himself for the corresponding examination in the preceding June.

12. Only with the special permission of the Senate, given on the recommendation of the Board of the Faculties of Science and Technology, will a candidate be permitted to present himself for the examination on a required first-year course later than two years after starting that course or later than the end of the third year of a scheme of study.

* Details of the examination approved for the ordinary degree in biochemistry are given on page 517.

†Except in schemes of study in which physics is a principal subject other than mathematics-physics; in such schemes a course in a subject approved by the Director of Combined Studies may be substituted for the third-year course in mathematics.

13. Normally a candidate may not proceed to a more advanced course in a subject until he has attained a sufficient standard in, or, in accordance with regulation 3, has been exempted from the examination on the preceding course laid down for the subject.

14. Candidates presenting themselves for the prescribed examination in a subject at the end of the second, third or fourth year of a scheme of study and failing to pass therein may on the recommendation of the examiners be deemed to have passed the examination in that subject corresponding to an earlier year in the scheme of study.

15. Candidates proceeding to the degree of Bachelor of Science by a combined scheme of study who fail to pass the examinations in a second- or third-year course but who reach a sufficient standard therein may on the recommendation of the examiners and the Director of Combined Studies be deemed to have satisfied the requirement of regulation 5 in respect of a course in one subject for one academic year.

16. Only in exceptional circumstances will the Board of the Faculties of Science and Technology grant permission to transfer from one scheme of study to another later than the end of the second year of the four-year scheme.

## THE DEGREE OF MASTER OF SCIENCE

*Candidates proceeding by research*

17. Candidates admitted under the provisions of articles 13(c), (d) or (e) must fulfil the following conditions:

(a) Be registered as students of the University.

(b) Prosecute research under supervision: a candidate working in a teaching institution other than the University must arrange for frequent personal contact with his supervisor, and may be required to attend in the University for certain specified periods; a candidate who is a member of the staff of an industrial or scientific establishment will be required to attend in the University for a specified period, to be determined in each case by the Board of the Faculties of Science and Technology.

(c) Give evidence by examination or otherwise to the head of the department concerned not later than the end of the third term of their period of study that their progress has been satisfactory.

18. A candidate must not submit as his thesis one for which a degree has been awarded in this or any other university, or which is under consideration for the award of a degree in another university; but he will not be precluded from incorporating in his thesis any part of such work provided that he states his desire to do so at the time of his application for acceptance as a candidate and in the thesis itself indicates the part of the work so incorporated.

19. A copy of the thesis approved for the degree will be retained in the University library.

NOTE.—It is advisable for graduates and diplomates of the University who read for the degree of M.Sc., without registering as students of the University to consult the head of the appropriate department in the University before submitting for approval by the Board a subject of research for the degree of Master of Science.

*Candidates proceeding by course of advanced study*

20. Candidates admitted under the provisions of articles 17(a) or (b) must fulfil the following conditions:

(a) Be registered as students of the University.

(b) Follow an approved course of advanced study (which may include research) in the University under the direction of the head of the department concerned.*

(c) Attend regularly the prescribed scheme of study and perform the work of the class to the satisfaction of the head of the department concerned.

(d) Give evidence by examination or otherwise, to the head of the department concerned not later than the end of the third term of their period of study that their progress has been satisfactory.

## THE DEGREE OF DOCTOR OF PHILOSOPHY

The degree of Doctor of Philosophy is governed by Ordinance II, articles 50 to 52 and relevant regulations which are set out on pages 299 and 310.

## THE DEGREE OF DOCTOR OF SCIENCE

21. Application for the degree of Doctor of Science shall be made in writing to the Registrar. It should be accompanied by three copies of the thesis and/or publications submitted in support of the application. Theses not already published must be drawn up in a form suitable for publication. In the case of work submitted under joint authorship, the applicant must indicate to the satisfaction of the Senate his own share in the joint production. A copy of the thesis approved for the degree will be retained in the University library. A candidate must not submit in chief or sole support of his application for the degree a thesis for which a degree has been awarded in this or any other university, or which is under consideration for the award of a degree in another university; but he will not be precluded from submitting in additional support of his application a thesis for which a degree has already been awarded or from incorporating (in whole or in part) such work in the thesis submitted provided he clearly indicates the work thus submitted or incorporated.

The application must be accompanied by the prescribed fee.

*Details of prescribed schemes of study and prescribed examinations are given on pages 521 to 524.

## REGULATIONS RELATING TO EXAMINATIONS

22. The examinations will ordinarily be held in June of each year, but supplementary examinations on first-year courses will also be held in September. Candidates will be accepted for the supplementary examinations in any subject only with the special permission of the Senate. Every candidate will be required to present himself at the degree examination in each subject at the end of the session in which he has completed his course of study in that subject, unless he has obtained the permission of the Board of the Faculties of Science and Technology to defer his examination.

23. In addition to the degree examinations, departmental examinations will be held at times and on conditions determined by the head of the department concerned. All students studying for a degree are required to submit themselves to such departmental examinations in their subjects of study. In courses extending over more than one session students may not begin the more advanced work of a succeeding session unless they have done the work required throughout the course to the satisfaction of the head of the department and have passed the departmental examinations.

24. Entries for the June examinations—both degree and departmental—shall in all cases be made through the Registrar. Only those students whose lecture and laboratory attendances are approved by the heads of the departments concerned and whose entry forms are received before 30 January, will be admitted to the examination.

[Attention is drawn to the general regulations for all examinations set out on page 248.)

# PRESCRIBED SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF SCIENCE *

Candidates should note that in order to qualify for admission to a scheme of study for a first degree in the University, they must satisfy both a *General Requirement* and a *Course Requirement*. For information regarding the *General Requirement*, for purposes of matriculation, candidates should write to The Secretary, Joint Matriculation Board, Manchester 15. The *Course Requirement* is set out at the beginning of each of the entries below for schemes of study in the Faculty of Science.

Approved schemes of study under the Ordinance and Regulations for the degree of B.Sc. in the Faculty of Science are set out below under the headings "Schemes of study in two main subjects (combined)" and "Schemes of study in one main subject". Except for the single-subject scheme in geography, the schemes shown are four-year schemes on which Honours may be awarded. Direct entry to the second year of the scheme is usually possible for suitably qualified entrants who may thereby take an Honours degree in three years. (Exceptions to this general rule are the single-subject schemes in Biophysics, Psychology and Biochemistry).

Details of courses specified in the schemes of study are given under the corresponding subject headings in the section COURSES IN THE FACULTY OF SCIENCE, p. 525.

Enquiries should be addressed to the head of the appropriate department in the case of schemes in one main subject and to the Director of Combined Studies in the Faculty of Science in the case of the degree schemes in two main subjects (combined).

## SCHEMES OF STUDY IN TWO MAIN SUBJECTS (COMBINED)

Combined schemes of study are designed to provide for the study of two principal subjects to a high level with support from another subject (or subjects) which is studied to a lower level. The ancillary subject (or subjects) is, in general, chosen for its bearing on the two principal subjects, although the choice may usually be made from among a group of applicable subjects.

Approved combinations of principal subjects are set out below. Schemes of study in the approved combinations are designed on a four-year basis but, in most schemes, suitably qualified candidates may be admitted to the second year of the scheme (see p. 479) and will thereby be able to complete the scheme in three years. The course requirements for admission to the second year of a scheme of study depend on the combinations of principal subjects and are given under the appropriate headings below.

The principal subjects are studied throughout the scheme of study or, in the case of subjects in which there are no first-year courses (usually subjects

*For schemes of study leading to the degree of Bachelor of Science in general studies, available only to students admitted before October 1962, see the Science Prospectus or Calendar for 1962-63.

which are not taught at school), in the second, third and fourth years of the four-year scheme. Ancillary subjects are studied in the first, second and third years of a scheme and may consist of one year's study in one subject and two years' study in another, or three years' study in one subject. The three-year schemes of study will be identical with the second, third and fourth years of the four-year schemes as far as courses in the principal subjects are concerned. The choice of ancillary subjects and the courses therein will depend, however, on the subjects passed at the Advanced level of the examination for the General Certificate of Education (or equivalent examination) and the level of attainment therein. Courses in ancillary subjects will be selected in consultation with the Director of Combined Studies from among those approved for the scheme of study as set out below (although the years of the scheme in which these courses are taken may, with the permission of the Director of Combined Studies, be varied from those shown).

Details of the content of the various courses prescribed in the schemes of study will be found under the headings of the appropriate departments in the section on Courses in the Faculty of Science.

*The provision of schemes of study with combinations of principal subjects other than those listed will be considered and may be approved subject to their academic suitability and to time-table considerations. Those interested in combinations not listed should address enquiries to the Director of Combined Studies in the Faculty of Science.*

**BACTERIOLOGY-BIOCHEMISTRY:** The scheme of study leading to the degree of Bachelor of Science in Bacteriology and Biochemistry (combined) extends over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

### *Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. This requirement will normally be met by passes at advanced level in two of the following: chemistry, physics and a biological subject (botany, zoology or biology), and a pass at ordinary level in the third; candidates without these qualifications may be considered.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 5, page 479.)

*One* pass must be in chemistry.
The *second* must be in botany, zoology or biology.
The *third* must be in physics.

### *Scheme of Study*

First year

Chemistry 1A or 1B
Biophysics 1A or Physics 1A
Botany 1A or 1B or Zoology 1A

Second year
Bacteriology 2A
Biochemistry 2A
Agricultural chemistry G1 or Botany 2A or Chemistry 2A or 2B or Physics 2B or Zoology 2A or a course in a subject approved by the Director of Combined Studies.
Third year
Bacteriology 3A
Biochemistry 3A
Agricultural chemistry G1 or Zoology 2A or 3A
Fourth year
Bacteriology 4A
Biochemistry 4A

**BACTERIOLOGY-BOTANY:** The scheme of study leading to the degree of Bachelor of Science in Bacteriology and Botany (combined) extends over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

*Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. This requirement will normally be met by passes at advanced level in two of the following: chemistry, physics and a biological subject (botany, zoology or biology), and a pass at ordinary level in the third; candidates without these qualifications may be considered.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 5, page 479.)

*One* pass must be in botany (or biology).
The *second* must be in chemistry.
The *third* must be in physics.

*Scheme of Study*

First year
Botany 1A or 1B
Chemistry 1A or 1B
Biophysics 1A or Physics 1A
Second year
Bacteriology 2A
Botany 2A
Biochemistry 2A
Third year
Bacteriology 3A
Botany 3A
Agricultural chemistry G1 or Biochemistry 3A or a course in a subject approved by the Director of Combined Studies.
Fourth year
Bacteriology 4A
Botany 4A

**BACTERIOLOGY-CHEMISTRY:** The scheme of study leading to the degree of Bachelor of Science in Bacteriology and Chemistry (combined) extends over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

## *Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. This requirement will normally be met by passes at advanced level in two of the following: chemistry, mathematics, physics and a biological subject (botany, zoology or biology), and a pass at ordinary level in the others; candidates without these qualifications may be considered. Candidates not presenting mathematics at advanced level should have some knowledge of elementary calculus as a background to courses in chemistry.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 5, page 479.)

*One* pass must be in chemistry.

The *second* must be in botany, zoology or biology.

The *third* must be in physics.

## *Scheme of Study*

First year

Chemistry 1A or 1B
Physics 1A
Botany 1A or 1B or Zoology 1A

Second year

Bacteriology 2A
Chemistry 2A
Biochemistry 2A

Third year

Bacteriology 3A
Chemistry 3A
Agricultural chemistry G1 or G2 or Biochemistry 3A or a course in a subject approved by the Director of Combined Studies.

Fourth year

Bacteriology 4A
Chemistry 4A

A course in elementary mathematics may be added to the scheme of study for those whose background in mathematics is inadequate.

**BACTERIOLOGY-ZOOLOGY:** The scheme of study leading to the degree of Bachelor of Science in Bacteriology and Zoology (combined) extends over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

## *Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. This requirement will

normally be met by passes at advanced level in two of the following: chemistry, physics and zoology (or biology), and a pass at ordinary level in the third; candidates without these qualifications may be considered.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 5, page 479.)

*One* pass must be in chemistry.
The *second* must be in zoology or biology.
The *third* must be in physics.

*Scheme of Study*

First year
- Chemistry 1A or 1B
- Zoology 1A
- Biophysics 1A or Physics 1A

Second year
- Bacteriology 2A
- Zoology 2A
- Biochemistry 2A

Third year
- Bacteriology 3A
- Zoology 3A
- Agricultural chemistry G2 or Biochemistry 3A or a course in a subject approved by the Director of Combined Studies.

Fourth year
- Bacteriology 4A
- Zoology 4A

**BIOCHEMISTRY-BOTANY:** The scheme of study leading to the degree of Bachelor of Science in Biochemistry and Botany (combined) extends over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

*Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. This requirement will normally be met by passes at advanced level in two of the following: chemistry, physics and a biological subject (botany, zoology or biology), and a pass at ordinary level in the third; candidates without these qualifications may be considered.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 5, page 479.)

*One* pass must be in botany (or biology).
The *second* must be in chemistry.
The *third* must be in physics.

*Scheme of Study*

First year
- Botany 1A or 1B
- Chemistry 1A or 1B
- Biophysics 1A or Physics 1A

Second year
- Biochemistry 2A
- Botany 2A
- Bacteriology 2A

Third year
- Biochemistry 3A
- Botany 3A
- Agricultural chemistry G1 or G2 or Chemistry 2A or 2B or Bacteriology 3A or a course in a subject approved by the Director of Combined Studies.

Fourth year
- Biochemistry 4A
- Botany 4A

**BIOCHEMISTRY-ZOOLOGY:** The scheme of study leading to the degree of Bachelor of Science in Biochemistry and Zoology (combined) extends over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

*Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. This requirement will normally be met by passes at advanced level in two of the following: chemistry, physics and a biological subject (botany, zoology or biology), and a pass at ordinary level in the third; candidates without these qualifications may be considered.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 5, page 479.)

*One* pass must be in chemistry.
The *second* must be in zoology (or biology).
The *third* must be in physics.

*Scheme of Study*

First year
- Chemistry 1A
- Physics 1A
- Zoology 1A

Second year
- Biochemistry 2A
- Zoology 2A
- Bacteriology 2A

Third year
Biochemistry 3A
Zoology 3A
Bacteriology 3A or a course in a subject approved by the Director of Combined Studies.
Fourth year
Biochemistry 4A
Zoology 4A

**BOTANY-CHEMISTRY:** The scheme of study leading to the degree of Bachelor of Science in Botany and Chemistry (combined) extends over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

*Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. This requirement will normally be met by passes at advanced level in two of the following: chemistry, mathematics, physics and botany (or biology), and a pass at ordinary level in the others; candidates without these qualifications may be considered. Candidates not presenting mathematics at advanced level should have some knowledge of elementary calculus as a background to courses in chemistry.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 5, page 479.)

*One* pass must be in botany (or biology).
The *second* must be in chemistry.
The *third* must be in physics.

*Scheme of Study*

First year
Botany 1A or 1B
Chemistry 1A or 1B
Physics 1A
Second year
Botany 2A
Chemistry 2A
Biochemistry 2A
Third year
Botany 3A
Chemistry 3A
Agricultural chemistry G1 or G2 or Agricultural botany G1 or G2 or Bacteriology 2A
Fourth year
Botany 4A
Chemistry 4A

A course in elementary mathematics may be added to the scheme of study for those whose background in mathematics is inadequate.

**BOTANY-ZOOLOGY:** The scheme of study leading to the degree of Bachelor of Science in Botany and Zoology (combined) extends over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

## *Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. This requirement will normally be met by passes at advanced level in two of the following: chemistry, physics and a biological subject (botany, zoology or biology), and a pass at ordinary level in the third; candidates without these qualifications may be considered.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 5, page 479.)

*One* pass must be in botany.
The *second* must be in chemistry.
The *third* must be in zoology.

## *Scheme of Study*

First year
- Botany 1A or 1B
- Zoology 1A
- Chemistry 1A or 1B

Second year
- Botany 2A
- Zoology 2A
- Biochemistry 2A

Third year
- Botany. 3A
- Zoology 3A
- Bacteriology 2A or Biochemistry 3A or a course in a subject approved by the Director of Combined Studies.

Fourth year
- Botany 4A
- Zoology 4A

**CHEMISTRY-GEOLOGY:** The scheme of study leading to the degree of Bachelor of Science in Chemistry and Geology (combined) extends over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

## *Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. This requirement will normally be met by passes at advanced level in two of the following: chemistry, mathematics and physics, and a pass at ordinary level in the third; candidates without these qualifications may be considered.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 5, page 479.)

*One* pass must be in chemistry.

The *second* must be in mathematics (which, if examined as one subject, must include both pure and applied mathematics).

The *third* must be in physics.

## *Scheme of Study*

Geology is not normally included in the scheme of study until the second year, although those exempted from one or two first-year courses may take an introductory course in Geology (1C) in the first year. In the third and fourth years, alternative courses in geology are available ; it is also possible to include an additional course in geology in place of a course in an ancillary subject in the third year.

First year

Chemistry 1A or 1B
Mathematics 1A
Physics 1A

Second year

Chemistry 2A
Geology 2A
Mathematics 2A or Physics 2B or Statistics 2A or a course in a subject approved by the Director of Combined Studies.

Third year

Chemistry 3A
Geology 3A or 3B
Mathematics 3A or Physics 2B or Statistics 2A or an additional course in Geology (3A or 3B)

Fourth year

Chemistry 4A
Geology 4A or 4B

**CHEMISTRY-HISTORY OF SCIENCE AND/OR PHILOSOPHY:** The schemes of study leading to the degree of Bachelor of Science in Chemistry and History of Science (combined), Chemistry and Philosophy (combined) and Chemistry and History of Science and Philosophy (combined) extend over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

## *Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. This requirement will normally be met by passes at advanced level in two of the following: chemistry, mathematics and physics, and a pass at ordinary level in the third; candidates without these qualifications may be considered. Candidates not presenting mathematics at advanced level should have some knowledge of elementary calculus as a background to courses in chemistry.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 5, page 479.)

*One* pass must be in chemistry.

The *second* must be in mathematics (examined as one subject and including both pure and applied mathematics) or physics.

The *third* must be in any approved subject.

*Alternatively*, the *second* and *third* may be in mathematics examined as two subjects.

*Scheme of Study*

Commencing with a common course covering both history of science and philosophy in the second year, alternative courses in history of science *or* philosophy are available in the third (and carry through into the fourth) year; it is also possible to include courses in *both* history of science *and* philosophy in the third year, in which case a course in an ancillary subject is dropped from the scheme.

First year
- Chemistry 1A or 1B
- Mathematics 1A
- Physics 1A

Second year
- Chemistry 2A
- History of science and Philosophy 2A
- Mathematics 2A or Physics 2B or Statistics 2A or a course in a subject approved by the Director of Combined Studies.

Third year

*Either*
- Chemistry 3A
- Philosophy 3A or History of science 3B
- Physics 2B or Statistics 2A or Mathematics 3A

*or*
- Chemistry 3A
- Philosophy 3A
- History of science 3C

Fourth year
- Chemistry 4A
- Philosophy 4A or History of science 4B or History of science and philosophy 4C (depending on the option taken in the third year).

A course in elementary mathematics may be added to the scheme of study for those whose background in mathematics is inadequate.

The first-year course in physics (Physics 1A) will be included in the scheme of study for those candidates who have not passed physics at advanced level.

**CHEMISTRY-MATHEMATICS:** The scheme of study leading to the degree of Bachelor of Science in Chemistry and Mathematics (combined) extends over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

## *Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. This requirement will normally be met by passes at advanced level in two of the following: chemistry, mathematics and physics, and a pass at ordinary level in the third; candidates without these qualifications may be considered.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 5, page 479.)

*One* pass must be in chemistry.
The *second* must be in mathematics (examined as one subject and including both pure and applied mathematics).
The *third* should preferably be in physics.
*Alternatively*, the *second* and *third* may be in mathematics examined as two subjects.

## *Scheme of Study*

First year
- Chemistry 1A or 1B
- Mathematics 1A
- Physics 1A

Second year
- Chemistry 2A
- Mathematics 2A
- Geology 2A or History of science and philosophy 2A or Physics 2A or 2B or Statistics 2A or a course in a subject approved by the Director of Combined Studies.

Third year
- Chemistry 3A
- Mathematics 3A
- Geology 2A or 3A or 3B or History of science and philosophy 2A or Philosophy 3A or History of science 3B or Physics 2B or 3A or Statistics 2A or a second or third-year course in a subject approved by the Director of Combined Studies.

Fourth year
- Chemistry 4A
- Mathematics 4A

The first-year course in physics (Physics 1A) will be included in the scheme of study for those candidates who have not passed physics at advanced level.

**CHEMISTRY-PHYSICS:** The scheme of study leading to the degree of Bachelor of Science in Chemistry and Physics (combined) extends over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

### *Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. This requirement will normally be met by passes at advanced level in two of the following: chemistry, mathematics and physics, and a pass at ordinary level in the third; candidates without these qualifications may be considered.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 5, page 479.)

*One* pass must be in chemistry.

The *second* must be in mathematics (which, if examined as one subject, must include both pure and applied mathematics).

The *third* must be in physics.

### *Scheme of Study*

First year
- Chemistry 1A or 1B
- Mathematics 1A
- Physics 1A

Second year
- Chemistry 2A
- Physics 2A
- Mathematics 2A

Third year
- Chemistry 3A
- Physics 3A
- Mathematics 3A

Fourth year
- Chemistry 4A
- Physics 4A

**CHEMISTRY-PHYSIOLOGY:** The scheme of study leading to the degree of Bachelor of Science in Chemistry and Physiology (combined) extends over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

### *Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. This requirement will normally be met by passes at advanced level in two of the following: chemistry, physics and zoology (or biology), and a pass at ordinary level in the third; candidates without these qualifications may be considered. Candidates not presenting mathematics at advanced level should have some knowledge of elementary calculus as a background to courses in chemistry.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 5, page 479.)

*One* pass must be in chemistry.
The *second* must be in zoology (or biology).
The *third* must be in physics.

*Scheme of Study*

First year
- Chemistry 1A or 1B
- Physics 1A
- Zoology 1A

Second year
- Chemistry 2A
- Physiology 2A
- Bacteriology 2A or Physics 2B or a course in a subject approved by the Director of Combined Studies.

Third year
- Chemistry 3A
- Physiology 3A
- Bacteriology 3A or Physics 2B or Zoology 2A

Fourth year
- Chemistry 4A
- Physiology 4A

A course in elementary mathematics may be added to the scheme of study for those whose background in mathematics is inadequate.

**GEOGRAPHY-MATHEMATICS:** The scheme of study leading to the degree of Bachelor of Science in Geography and Mathematics (combined) extends over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

*Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in geography and mathematics at advanced level are required.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 5, page 479.)

*One* pass must be in geography.
The *second* must be in mathematics (examined as one subject and including both pure and applied mathematics).
The *third* must be in any approved subject.
*Alternatively*, the *second* and *third* may be in mathematics examined as two subjects.

*Scheme of Study*

First year
- Mathematics 1A
- First-year courses in two other subjects approved by the Director of Combined Studies.

Second year
- Geography 2A

Mathematics 2A

A first-year course in a subject approved by the Director of Combined Studies or a second-year course in one of the subjects (other than mathematics) taken in the first year or Statistics 2A.

Third year

Geography 3A

Mathematics 3A

A second-year course in the subject in which a first-year course was taken in the first or second year or Economics 2A or Statistics 2A or a third-year course in a subject in which a second-year course was taken in the second year.

Fourth year

Geography 4A

Mathematics 4A

**GEOLOGY-MATHEMATICS:** The scheme of study leading to the degree of Bachelor of Science in Geology and Mathematics (combined) extends over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

### *Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. This requirement will normally be met by passes at advanced level in two of the following: chemistry, mathematics and physics, and a pass at ordinary level in the third; candidates without these qualifications may be considered.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 5, page 479.)

*One* pass must be in chemistry.

The *second* must be in mathematics (which, if examined as one subject, must include both pure and applied mathematics).

The *third* must be in physics.

### *Scheme of Study*

Geology is not normally included in the scheme of study until the second year, although those exempted from one or two first-year courses may take an introductory course in Geology (1C) in the first year. In the third and fourth years, alternative courses in geology are available; it is also possible to include an additional course in geology in place of a course in an ancillary subject in the third year.

First year

Chemistry 1A or 1B

Mathematics 1A

Physics 1A

Second year

Geology 2A

Mathematics 2A

Chemistry 2A or 2D or Physics 2A or 2B or Statistics 2A or a course in a subject approved by the Director of Combined Studies.

Third year

Geology 3A or 3B
Mathematics 3A
Chemistry 2A or 2D or 3A or 4B or Physics 2B or 3A or Statistics 2A or 3A or an additional course in Geology (3A or 3B).

Fourth year

Geology 4A or 4B
Mathematics 4A

**GEOLOGY-PHYSICS:** The scheme of study leading to the degree of Bachelor of Science in Geology and Physics (combined) extends over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

*Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. This requirement will normally be met by passes at advanced level in two of the following: chemistry, mathematics and physics, and a pass at ordinary level in the third; candidates without these qualifications may be considered.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 5, page 479.)

*One* pass must be in chemistry.

The *second* must be in mathematics (which, if examined as one subject, must include both pure and applied mathematics).

The *third* must be in physics.

*Scheme of Study*

Geology is not normally included in the scheme of study until the second year, although those exempted from one or two first-year courses may take an introductory course in Geology (1C) in the first year. In the third and fourth years, alternative courses in geology are available.

First year

Chemistry 1A or 1B
Mathematics 1A
Physics 1A

Second year

Geology 2A
Physics 2A
Mathematics 2A

Third year

Geology 3A or 3B
Physics 3A
Mathematics 3A

Fourth year
Geology 4A or 4B
Physics 4A

**MATHEMATICS-HISTORY OF SCIENCE AND/OR PHILOSOPHY:** The schemes of study leading to the degree of Bachelor of Science in Mathematics and History of Science (combined), Mathematics and Philosophy (combined) and Mathematics and History of Science and Philosophy (combined) extend over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

*Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. This requirement will normally be met by passes at advanced level in mathematics and one other subject, preferably chemistry or physics in the case of those candidates taking a combination including history of science.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 5, page 479.)

*One* pass must be in mathematics (examined as one subject and including both pure and applied mathematics).
The *second* and *third* must be in any approved subjects.
*Alternatively*, the *first* and *second* may be in mathematics examined as two subjects.
Candidates taking a combination including history of science should preferably have a pass in chemistry or physics.

*Scheme of Study*

Commencing with a common course covering both history of science and philosophy in the second year, alternative courses in history of science *or* philosophy are available in the third (and carry through into the fourth) year; it is also possible to include courses in both history of science *and* philosophy in the third year, in which case a course in an ancillary subject is dropped from the scheme. When the history of science option, or the history of science and philosophy option, is selected, an experimental science (preferably physics) will normally be included in the scheme of study and a school background in an experimental science is desirable.

First year
Mathematics 1A
First-year courses in two other subjects approved by the Director of Combined Studies.
Second year
Mathematics 2A
History of science and philosophy 2A
A course in a subject approved by the Director of Combined Studies.

Third year
*Either* Mathematics 3A
Philosophy 3A or History of science 3B
A second- or third-year course in a subject approved by the Director of Combined Studies.
*or* Mathematics 3A
Philosophy 3A
History of science 3C
Fourth year
Mathematics 4A
Philosophy 4A or History of science 4B or History of science and philosophy 4C (depending on the option taken in the third year).

**MATHEMATICS-PHYSICS:** The scheme of study leading to the degree of Bachelor of Science in Mathematics and Physics (combined) extends over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

## *Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. This requirement will normally be met by passes at advanced level in mathematics and physics.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 5, page 479.)

*One* pass must be in physics.
The *second* must be in mathematics (examined as one subject and including both pure and applied mathematics).
The *third* must be in any approved subject.
*Alternatively*, the *second* and *third* may be in mathematics examined as two subjects.

## *Scheme of Study*

First year
Mathematics 1A
Physics 1A
A first-year course in a subject approved by the Director of Combined Studies.
Second year
Mathematics 2A
Physics 2A
A first-year course in a subject approved by the Director of Combined Studies or a second-year course in the third subject taken in the first year or Geology 2A* or History of science and philosophy 2A or Statistics 2A.

*The inclusion of ancillary courses in geology requires that the first-year course in chemistry shall have been completed or exempted.

Third year
Mathematics 3A
Physics 3A
A second-year course in one of the subjects in which a first-year course was taken in the first or second year or Geology 2A* or History of science and philosophy 2A or Statistics 2A or a third-year course in one of the subjects in which a second-year course was taken in the second year.

Fourth year
Mathematics 4A
Physics 4A

**MATHEMATICS-STATISTICS:** The scheme of study leading to the degree of Bachelor of Science in Mathematics and Statistics (combined) extends over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

## *Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. This requirement will normally be met by passes at advanced level in mathematics and one other approved subject.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 5, page 479.)

*One* pass must be in mathematics (examined as one subject and including both pure and applied mathematics).
The *second* and *third* must be in any approved subjects.
*Alternatively*, the *first* and *second* may be in mathematics examined as two subjects.

## *Scheme of Study*

First year
Mathematics 1A
First-year courses in two other subjects approved by the Director of Combined Studies.

Second year
Mathematics 2A
Statistics 2A
A first-year course in a subject approved by the Director of Combined Studies or a second-year course in a subject in which a first-year course was taken in the first year or Economics 2A or Geology 2A* or History of science and philosophy 2A.

*The inclusion of ancillary courses in geology requires that the first-year course in chemistry shall have been completed or exempted.

Third year
Mathematics 3A
Statistics 3A
A second-year course in a subject in which a first-year course was taken in the first or second year or a third-year course in a subject in which a second-year course was taken in the second year.

Fourth year
Mathematics 4A
Statistics 4A

**PHYSICS-HISTORY OF SCIENCE OR PHILOSOPHY:** The schemes of study leading to the degree of Bachelor of Science in Physics and History of Science (combined) and Physics and Philosophy (combined) extend over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

## *Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. This requirement will normally be met by passes at advanced level in mathematics and physics.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 5, page 479.)

*One* pass must be in physics.
The *second* must be in mathematics (examined as one subject and including both pure and applied mathematics).
The *third* must be in any approved subject.
*Alternatively*, the *second* and *third* may be in mathematics examined as two subjects.

## *Scheme of Study*

Commencing with a common course covering both history of science and philosophy in the second year, alternative courses in history of science *or* philosophy are available in the third (and carry through into the fourth) year.

First year
Mathematics 1A
Physics 1A
A first-year course in one other subject approved by the Director of Combined Studies.

Second year
Physics 2A
History of science and philosophy 2A
Mathematics 2A

Third year

Physics 3A
Philosophy 3A or History of science 3B
Mathematics 3A

Fourth year

Physics 4A
Philosophy 4A or History of science 4B

**PHYSICS-STATISTICS:** The scheme of study leading to the degree of Bachelor of Science in Physics and Statistics (combined) extends over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

*Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. This requirement will normally be met by passes at advanced level in mathematics and physics.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 5, page 479.)

*One* pass must be in physics.
The *second* must be in mathematics (examined as one subject and including both pure and applied mathematics).
The *third* must be in any approved subject.
*Alternatively*, the *second* and *third* may be in mathematics examined as two subjects.

*Scheme of Study*

First year

Mathematics 1A
Physics 1A
A first-year course in one other subject approved by the Director of Combined Studies

Second year

Physics 2A
Statistics 2A
Mathematics 2A

Third year

Physics 3A
Statistics 3A
Mathematics 3A

Fourth year

Physics 4A
Statistics 4A

**PSYCHOLOGY-STATISTICS:** The scheme of study leading to the degree of Bachelor of Science in Psychology and Statistics (combined) extends over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

## *Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. This requirement will normally be met by passes at advanced level in mathematics and one other approved subject, preferably physics. Physics must have been passed at ordinary level.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 5, page 479.)

*One* pass must be in physics.
The *second* must be in mathematics (examined as one subject and including both pure and applied mathematics).
The *third* must be in any approved subject.
*Alternatively*, the *second* and *third* may be in mathematics examined as two subjects.

## *Scheme of Study*

First year

Mathematics 1A
Physics 1A
A first-year course in one other subject approved by the Director of Combined Studies.

Second year

Psychology 2A
Statistics 2A
Mathematics 2A

Third year

Psychology 3A
Statistics 3A
Mathematics 3A

Fourth year

Psychology 4A
Statistics 4A

## SCHEMES OF STUDY IN ONE MAIN SUBJECT

**MATHEMATICS:** The scheme of study leading to the degree of Bachelor of Science in one main subject in Mathematics may extend over four years, but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.*

### *Course Requirement*

For admission to the scheme of study candidates must produce evidence of ability in mathematics.

Candidates will normally have taken mathematics, including both pure and applied mathematics, either as one subject (Mathematics or Mathematics for Science) or as two subjects (Mathematics and Further Mathematics, Mathematics and Higher Mathematics, or Pure Mathematics and Applied Mathematics) at the advanced level in the General Certificate of Education examination. Candidates who offer Pure Mathematics and Physics at advanced level will be considered.

There are no special requirements restricting the choice of supporting subjects at advanced level. Nevertheless, some knowledge of physics, at least up to the ordinary level of the General Certificate of Education examination, is desirable.

### *Scheme of Study*

The prescribed courses in mathematics for the four-year scheme of study are Mathematics 1MM, 2MM, 3MM and 4MM taken in successive years, and for the three-year scheme of study Mathematics 2MM, 3MM and 4MM taken in successive years.

In addition to the prescribed courses in mathematics, a candidate must reach a satisfactory standard in a one-year course in an ancillary subject. The ancillary subject will be selected after consultation with the head of the department of mathematics from a number of one-year courses in the Faculties of Arts, Economic and Social Studies, Science and Technology.

**PHYSICS:** The scheme of study leading to the degree of Bachelor of Science in one main subject in Physics may extend over four years, but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

### *Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required.

*One* of these passes will normally be in physics.

The *second* will normally be in pure and applied mathematics taken either as one or as two subjects.

Candidates possessing other subject combinations will be considered.

*For information regarding the scheme of study leading to the degree of Bachelor of Arts in special studies in Mathematics, see pages 377–8.

*For exemption from the first year of the four-year scheme* passes at a high standard at advanced level are required in physics and in mathematics which, if examined as one subject, must include pure and applied mathematics. (For conditions of exemption see regulation 3, page 479.)

### *Scheme of Study*

First year

For those who are accepted, but not exempted from the first year, courses will be arranged individually which are appropriate to their background and interests. These will normally include courses in physics and mathematics which lead up to the second-year work, and in two other subjects.

Second year

Physics 2PX
Mathematics 2PX
An introductory or one-year course in Russian for science students, philosophy, geology or an approved alternative subject

Third year

Physics 3PX
Mathematics 3PX

Fourth year

Physics 4PX

Candidates in the third or fourth year of the scheme may be advised to take appropriate additional courses or lectures.

**CHEMISTRY:** The scheme of study leading to the degree of Bachelor of Science in one main subject in Chemistry may extend over four years but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

### *Course Requirement*

*Four-year scheme:* for admission to the scheme of study, passes in three approved subjects at advanced level are required.

*One* of these passes must be in chemistry.
The *second* must be in physics.
The *third* should preferably be in mathematics.

*For exemption from the first year of the four-year scheme* passes at a high standard in chemistry and in either physics or mathematics are required. (For conditions of exemption see Regulation 3, page 479). For exemption from first-year mathematics (Mathematics 1A) a performance higher than a pass is required in mathematics at advanced level; if taken as one subject, this must include both pure and applied mathematics.

### *Scheme of Study*

First year

Mathematics 1A
Physics 1A
Chemistry 1B or 2A

Second year
Chemistry 2CH
One of the following courses:
History of science 2CH
Mathematics 2CH
*Statistics 2A
*Physics 2B
Biochemistry 2A
Agricultural chemistry G1 *and* G2 (lectures only)
Third year
Chemistry 3CH
Students may elect to take an optional additional course; this can be one of those listed for the second year or another course approved by the Chairman of the School.
Fourth year
Chemistry 4CH

Students admitted to the first year will be required to attend one or more additional courses, according to the number of exemptions obtained from the prescribed first-year courses; these may be chosen from the list for the second year, or may be other courses approved by the chairman of the school.

Students admitted directly to the second year who are not exempted from the first-year courses in *both* mathematics *and* physics will include Mathematics 1A or Physics 1A, as the case may be, in the second year of the scheme of study.

All candidates for the degree with Honours in chemistry are required to pass language examinations in German and in one other foreign language in which there is a substantial scientific literature. Each language examination is of one hour's duration, and consists of written comprehension tests on, and/or translation of, short passages from the chemical literature.* Dictionaries may be used in the examinations, which are held once a year, and which may be taken in any year of the scheme of study. No candidate will be presented for the degree with Honours unless he has passed both language examinations; the requirement may be waived in the case of a candidate who is awarded the Ordinary degree.

**BOTANY:** The scheme of study leading to the degree of Bachelor of Science in one main subject in Botany may extend over four years, but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

*Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. These passes may be in any approved subject, but a good knowledge of the physical sciences and/or mathematics is desirable.

*For the time being, only a limited number of students can be admitted to these courses.

*For exemption from the first year of the four-year scheme* passes at a high standard, preferably in three approved subjects at advanced level, are required. (For conditions of exemption see regulation 3, page 479.)

*One* pass must be in chemistry.

The *second* and *third* should normally be in botany or biology and in mathematics (pure and applied) or physics.

Candidates without these qualifications may be considered.

A knowledge of languages is very desirable.*

*Scheme of Study*

First year

Botany 1B

Physics 1A, Biophysics 1A or Mathematics 1A

Chemistry 1A or 1B

A course in one other subject

Second year

Botany 2A

A second-year course in one other subject, normally organic chemistry or biochemistry.

Third year

Botany 3BT

A course in one other subject, normally general and physical chemistry or agricultural chemistry.

Fourth year

Botany 4BT

*Field Work*

Whole-day and half-day class excursions are arranged from time to time during the session, and at least once each year opportunity will be given for several consecutive days to be spent on ecological work away from Leeds.

All students taking degree courses in botany are expected to attend a proportion of such field excursions unless exempted therefrom by the head of department. In addition all students taking botany as a principal subject for a degree must submit a written report of an individual piece of ecological work which will be carried out in the long vacation of the second or third year of the scheme.

**BIOPHYSICS:** A scheme of study extending over a period of four years and leading to the degree of Bachelor of Science in one main subject in Biophysics.

*Course Requirement*

For admission to the scheme a satisfactory performance in three approved subjects at advanced level is required.

*One* of these passes must be in physics.

The *second* must be in chemistry.

*University courses are available in German and in Russian for science students who have no previous knowledge of these languages, though botany students may find that their courses clash with others in the time table; see p. 550.

The *third* must be in mathematics.
A knowledge of modern languages and of biology is advantageous.

*Scheme of Study*

First year
- Physics 2A
- Chemistry 2D
- Mathematics 2PX
- (Botany 1B or Zoology 1A)*

Second year
- Physics 3A
- Chemistry 3A
- Mathematics 3PX
- (Botany 1B or Zoology 1A)*

Third year
- Biology 3A
- together with

| | | | |
|---|---|---|---|
| 1st term | Physics 4A | *or* | Chemistry 3D |
| | Chemistry 3D | | Biophysics 4B |
| 2nd term | Physics 4A | | Biophysics 4A |
| | Biophysics 4A | | Biophysics 4B |
| 3rd term | Physics 4A | | selected lectures from Biochemistry 4B1 |
| | Biophysics 4A | | Biophysics 4A |
| | | | Biophysics 4B |

Fourth year

| | | |
|---|---|---|
| Biophysics 5A<br>Biophysics 5C | *or* | Biophysics 5B<br>selected lectures from Biochemistry 5B1 (1st term only) |

**ZOOLOGY:** The scheme of study leading to the degree of Bachelor of Science in one main subject in Zoology may extend over four years, but suitably qualified candidates may be exempted from the first year and be able to complete the scheme of study in three years.

*Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. These passes may be in any approved subjects either in Arts or in Science.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 3, page 479.)

*One* of these must be in chemistry.
The *second* must be in botany, pure and applied mathematics, mathematics for science, or physics.
The *third* must be in biology or zoology.

*To be attended during the first year *or* the second year, depending upon developments vis à vis the time-table.

*Four-year scheme leading to the degree of Bachelor of Science in zoology*

First year

Zoology 1A

Chemistry 1A or 1B

A first-year course in a subject chosen from physics, mathematics, botany, geology or other approved subject in the Faculty of Science.

A further first-year course in a subject chosen from the list above or from economics, history and philosophy of science, fine art, Russian or other approved subject in the Faculty of Arts.

Second year

Zoology 2A

A second-year course in one of the science subjects taken in the first year

A further second-year course in physiology, bacteriology, biochemistry or in any subject taken in the first year.

Third year

Zoology 3ZO

A third-year course in a science subject taken in the second year.

Fourth year

Zoology 4ZO—full-time study of advanced aspects of the subject together with such project work as may be prescribed.

*Three-year scheme leading to the degree of Bachelor of Science in zoology*

First year exempt

Second year (1st year of residence)

Zoology 2A

A second-year course in the second subject in which a high mark was obtained at advanced level.

A first-year course—this must be chemistry if not already exempted; otherwise may be chosen from mathematics, physics, botany, geology, economics, Russian, etc.*

Third year (2nd year of residence)

Zoology 3ZO

A third-year course in the subject taken in the previous year.

Fourth year (3rd year of residence)

Zoology 4ZO—as in four-year scheme.

*Schemes for the degree of Bachelor of Science in zoology, with specialisation in agricultural zoology*

The schemes of study follow very closely those set out above (course requirements are also the same), except that in the third year a course in agricultural zoology replaces part of the content of the zoology course, and in the fourth year specialisation and project work are also in agricultural zoology.

*The choice of subject may be restricted by time-table considerations. The first-year course may be omitted and a second-year course substituted if marks of approximately 60 per cent were gained in *three* subjects at the advanced level.

**GEOLOGY:** The scheme of study leading to the degree of Bachelor of Science in one main subject in Geology may extend over four years, but suitably qualified candidates may be exempted from the first year and should be able to complete the scheme of study in three years.

## *Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in three approved subjects at advanced level are required. These passes may be in any approved subject at advanced level but candidates must have passes in chemistry, mathematics and physics at least at ordinary level.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 3, page 479.)

*One* of these passes must be in chemistry.

The *second* must be in pure and applied mathematics or in mathematics for science.

The *third* should preferably be in physics.

## *Scheme of Study*

First year

Mathematics 1A
Physics 1A
Chemistry 1A or 1B
First-year courses in other approved subjects may be substituted for any of the above from which exemption has been granted.

Second year

Geology 2A
Second-year courses in two subjects selected from mathematics, physics and chemistry.

Third year

Geology 3GL
A third-year course in one of the selected subjects taken in the second year
Surveying.

Fourth year

Geology 4GL
A geological investigation of a specific area including geological mapping and the presentation of a field report.

The courses in geology will include field work during the vacations.

A reading knowledge of two foreign languages is required and will be tested by examination; courses in German and in Russian for science students are available (see p. 550).

**GEOGRAPHY:** A scheme of study extending over a period of three years and leading to the degree of Bachelor of Science in one main subject in Geography.*

*For information regarding the scheme of study leading to the degree of Bachelor of Arts in special studies in Geography, see pages 370–1.

*Course Requirement*

For admission to the course passes in three approved subjects at advanced level are required although, exceptionally, candidates with two passes are considered.

*One* of these passes must be in geography.

The *second* and *third* may be in any approved science subject at advanced level.

In addition a pass in French or German at ordinary level is required.

*Scheme of Study*

First year

Geography 2GG

Two first-year or second-year courses in other approved subjects; geology will normally be one of these subjects, the other being chosen with the approval of the head of the department of geography. Normally first-year courses will be taken in both subjects, but candidates who have achieved a good performance in a subject at advanced level in the examinations for the General Certificate of Education may be exempted from the first-year course in that subject and may take the second-year course instead.

Second year

Geography 3GG

A second- or third-year course in a subject in the Faculty of Science; this will normally be one of the subjects (other than geography) studied in the first year.

Third year

Geography 4GG

Field work is an integral part of the degree course and will be tested in the final examination. All students must do field training in each of the three years; in the third year the period of field work will normally be spent abroad.

A competent reading knowledge of one modern foreign language is essential; during the course candidates must show that they have such a knowledge.

**PSYCHOLOGY:** A scheme of study extending over a period of four years and leading to the degree of Bachelor of Science in one main subject in Psychology.

*Course Requirement*

For admission to the course passes in two approved subjects at advanced level are required. These passes must be in two of the following subjects: pure and applied mathematics (or mathematics for science), physics, chemistry and zoology.

Candidates would be well advised to consult the requirements for admission to courses in physiology, zoology or engineering since one of these subjects is compulsory in the second year.

Candidates must have passed mathematics at ordinary level.

*Scheme of Study*

First year
Psychology 1PS
together with *three* of the following, chosen in consultation with the head of the department:
Chemistry 1A or 1B
Mathematics 1A
Engineering Introductory 1S
Zoology 1A
General economics 1
Introduction to sociology 1
Russian for science students 1A
Another approved subject

Second year
Psychology 2PS
Anatomy 2PS (neuroanatomy)
Physiology 2B *or* Zoology 2A *or* Engineering IIS

Third year
Psychology 3PS

Fourth year
Psychology 4PS

Experimental and practical work form an essential part of the psychology courses, especially in the second, third and fourth years.

Students are normally required to attend for a fortnight at an outside institution of research or professional application some time during their scheme of study.

The second-year examination in physiology or the subject approved in its stead is an integral part of the final examination; the results obtained will be taken into account in considering the candidate's results in the final degree examination.

Candidates will not be allowed to proceed to any year of the four-year scheme leading to the final examination for the degree of Bachelor of Science, in which Honours may be awarded, unless their performance on the preceding year's work is satisfactory.

**PHYSIOLOGY:** There are two methods of entry to schemes of study leading to the degree of Bachelor of Science in one main subject in Physiology. Under Scheme A, candidates are admitted by direct entry to a scheme of study extending over four years. Suitably qualified candidates may be exempted from the first year and be able to complete the scheme in three years. Under Scheme B, medical students who have completed the second M.B., Ch.B. examination may be permitted to intercalate a year to follow a one-year scheme of study for the degree of Bachelor of Science in physiology, based on the course work of Physiology 4F1.

*SCHEME A*

## *Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required.

*One* of these passes should preferably be in chemistry.

The *second* should preferably be in physics.

In addition some knowledge of biology and mathematics* would be an advantage; candidates without these qualifications may be considered.

***For exemption from the first year of the four-year scheme,*** passes at a high standard in three approved subjects at the advanced level are required.* (For conditions of exemption see regulation 3, page 479.)

*One* of these passes must be in chemistry.

The *second* must be in physics.

The *third* must be in zoology.

## *Scheme of Study*

First year

Physics 1A
Chemistry 1A or 1B
Zoology 1A

Second year

Physiology 2FI
Chemistry 2D
Chemistry 3D (in terms 2 and 3)
Anatomy 2Z (Histology)

Third year

Physiology 3FI
Chemistry 3D (in term 1)
A second-year course in physics, zoology or other approved subject

Fourth year

Physiology 4FI

A reading knowledge of French and German, which will be tested by examination, is required in both scheme A and scheme B.

**ANATOMY:** There are two methods of entry to schemes of study leading to the degree of Bachelor of Science in one main subject in Anatomy. Under Scheme A, candidates are admitted by direct entry to a scheme of study extending over four years. Suitably qualified candidates may be exempted from the first year and be able to complete the course in three years. Under Scheme B, medical students who have completed the second M.B., Ch.B. examination may be permitted to intercalate a year to follow a one-year scheme of study for the Bachelor of Science in anatomy.

*A knowledge of elementary calculus is desirable.

*SCHEME A*

*Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required. It is preferred that these passes should be any two of the following: botany, chemistry, physics, zoology.

*For exemption from the first year of the four-year scheme,* passes at a high standard in four approved subjects at advanced level are required. (For conditions of exemption see regulation 3, page 479).

*One* of these passes must be in botany.
The *second* must be in chemistry.
The *third* must be in physics.
The *fourth* must be in zoology.

*Scheme of Study*

First year
- Physics 1A
- Chemistry 1A or 1B
- Zoology 1A
- Botany 1A

Second year
- Anatomy 2AT
- A course in another subject approved by the professor of anatomy

Third year
- Anatomy 3AT
- A course in another subject approved by the professor of anatomy

Fourth year
- Anatomy 4AT

*SCHEME B*

During this year anatomy is studied without any medical bias and attention is primarily devoted to embryology, histology and neurology, to modern techniques of histochemistry, electron microscopy and tissue culture, and to consideration of the rapidly increasing knowledge concerning cells and their functional inter-relationships. During the latter part of the course students are normally given an opportunity to carry out a short research exercise on a suitable topic.

A reading knowledge of French and German which will be tested by examination is required in both scheme A and scheme B.

**BACTERIOLOGY:** A scheme of study extending over a period of four years and leading to the degree of Bachelor of Science in one main subject in Bacteriology.

*Course Requirement*

For admission to the scheme of study passes in two approved subjects at advanced level are required.

*One* of these passes must be in chemistry.
The *second* should normally be in physics.

In addition candidates should have a good knowledge of mathematics* and a modern foreign language. It is desirable that candidates should have passed at advanced level in chemistry and physics at a high standard so that they may be exempted from first-year courses in chemistry and physics and be permitted to follow a more advanced course in chemistry in the first year.

*Scheme of Study*

First year
- Biophysics 1A
- Chemistry 1A or 1B or Chemistry 2B
- Zoology 1A
- Botany 1A or 1B

Second year
- Bacteriology 2A
- Chemistry 2B or Chemistry 3C
- Biochemistry 2A or other approved subject.

Third year
- Bacteriology 3A
- Chemistry 3C (unless taken in the second year)
- Biochemistry 3A or other approved subject.

Fourth year
- Bacteriology 4BY

A reading knowledge of French and German is required and will be tested by examination.

**BIOCHEMISTRY:** A scheme of study extending over a period of four years and leading to the degree of Bachelor of Science in one main subject in Biochemistry.

*Course Requirement*

For admission to the scheme of study passes in three approved subjects at advanced level are required.

*One* of these passes must be in chemistry.

The *second* and *third* must be in two of the following: Biology, botany, mathematics (pure and applied) or mathematics for science, physics and zoology.

The passes in chemistry and in either the *second* or *third* subject must be at a high standard. In addition candidates not having passes in mathematics or physics at advanced level must have passes in these subjects at ordinary level.*

*Scheme of Study*

First year
- Chemistry 2A
- Chemistry 3D (in terms 2 and 3)
- Physiology 2A

*A knowledge of elementary calculus is desirable.

Second year
Chemistry 3D (in term 1)
Chemistry 4B
Physiology 3A
A course in another approved subject.
Third year
Biochemistry 4BI
Fourth year
Biochemistry 5BI

Tutorials and essays are arranged regularly throughout the third and fourth year and in the fourth year each student undertakes an individual practical investigation.

*Ordinary Degree*

A candidate wishing to apply for the Ordinary degree of B.Sc. in Biochemistry in accordance with the provisions of Article 9 of Ordinance V must pass the following examinations:

Chemistry 1B (unless exempted on G.C.E. performance)
Chemistry 2A
Physiology 2A
Physiology 3A
Chemistry 3D
Biochemistry 3A

**PHARMACOLOGY AND PHARMACY:** Students may be admitted to schemes of study leading to the degrees of Bachelor of Science in one main subject in Pharmacology or of Bachelor of Science in one main subject in Pharmacy. The methods of entry, course requirements and schemes of study are set below.

**PHARMACOLOGY:** There are two methods of entry to schemes of study leading to the degree of Bachelor of Science in one main subject in Pharmacology. Under Scheme A, candidates are admitted by direct entry to a scheme of study extending over four years. Suitably qualified candidates may be exempted from the first year and be able to complete the course in three years. Under Scheme B, a scheme of study which extends over one year may be followed either by medical students who have completed the third M.B., Ch.B. examination and who are permitted to intercalate a year into their medical studies, or by students who have obtained the degree of Bachelor of Science in pharmacy of this University.

*SCHEME A*

*Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required.

*One* of these passes should preferably be in chemistry.
The *second* may be in any approved subject.
In addition a pass in mathematics at ordinary level is required.*

*A knowledge of elementary calculus is desirable.

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 3, page 479.)

*One* of these passes must be in chemistry.
The *second* must be in physics.
The *third* must be in either biology or zoology.
In addition a pass in mathematics at ordinary level is required.*

*Scheme of Study*

First year
- Physics 1A
- Chemistry 1B or Chemistry 2D
- Zoology 1A

Second year
- Physiology 2A
- Chemistry 3E
- Chemistry 2D or other approved course

Third year
- Physiology 3A
- Pharmacology 3FM

Fourth year
- Pharmacology 4FM

A reading knowledge of two foreign languages (chosen from French, German and Russian) is required in either scheme and will be tested by examination during the course.

**PHARMACY:** The scheme of study leading to the degree of Bachelor of Science in one main subject in Pharmacy may extend over four years but suitably qualified candidates may be exempted from the first year and be able to complete the course in three years.

*Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in two approved subjects at advanced level are required.

*One* of these passes should preferably be in chemistry.
The *second* may be in any approved subject.
In addition a pass in mathematics at ordinary level is required.*

*For exemption from the first year of the four-year scheme* passes at a high standard in three approved subjects at advanced level are required. (For conditions of exemption see regulation 3, page 479.)

*One* of these passes must be in chemistry.
The *second* must be in physics.
The *third* must be in either biology or zoology.
In addition a pass in mathematics at ordinary level is required.*

*A knowledge of elementary calculus is desirable.

*Scheme of Study*

First year
- Physics 1A
- Chemistry 1B
- Zoology 1A

Second year
- Pharmacy 2FY
- Chemistry 2D
- Chemistry 3E

Third year
- Pharmacy 3FY
- Physiology 2B

Fourth year
- Pharmacy 4FY

A reading knowledge of two languages (chosen from French, German and Russian) will be required and will be tested by examination during the course. Candidates will be expected to gain some practical experience in a hospital pharmacy, usually during the summer vacation in the third year of study.

## PRESCRIBED SCHEME OF STUDY FOR THE POST-GRADUATE DIPLOMA IN THE HISTORY AND PHILOSOPHY OF SCIENCE

Candidates wishing to enter upon the course for the postgraduate diploma in the history and philosophy of science must have graduated in science at an approved university or hold qualifications accepted by the Senate as equivalent.

Each candidate will be required to pursue a course of study in the history and philosophy of science for a period of not less than three terms if a full-time student, or six terms if a part-time student. Part-time students will be required to attend for formal instruction in the University on at least two half-days a week, and also to do written work.

The examination at the end of the course will consist of four papers:

(a) The history of the natural sciences (2 papers)

(b) The science of an approved special period (1 paper)

(c) Logic and philosophy of science (1 paper)

Candidates will be expected to have knowledge both of the growth of ideas and techniques within the natural sciences and of the social and intellectual background to the development of science.

The diploma may be awarded with distinction to a candidate whose work is judged to be of outstanding merit.

# REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF MASTER OF SCIENCE

## ELECTRONIC COMPUTATION

Candidates accepted under the provisions of Article 17 of the Ordinance may proceed by attending a course of advanced study which will include

(a) approximately 90 lectures on computing systems and programming languages and numerical analysis and, in addition, approximately 30 lectures on a selection of topics, which for 1964-65 will be chosen from the following subjects:

Advanced numerical analysis

Operational research

Electronic computing methods in statistics and information processing

(b) practical instruction in computer programming

(c) the preparation of a short dissertation on a particular topic.

The examination will normally consist of three written papers, an assessment of the dissertation and, if the examiners require it, an oral examination.

## MATHEMATICS

Candidates accepted under the provisions of Article 17 of the Ordinance, may proceed by:

(a) attending a course of advanced study in
*either* Pure mathematics
*or* Applied mathematics
consisting of not less than six hours a week for one session.

(b) preparing a short dissertation on a designated mathematical topic.

In 1964-65 lectures on the following will be offered:

Pure Mathematics
Mathematical logic and the foundations of mathematics
Classical and topological analysis
Algebra

Applied Mathematics
The dynamics and physics of real gases
Magnetogasdynamics
Partial differential and integral equations

The examination will normally consist of three written papers, assessment of the dissertation and, if the examiners require it, an oral examination.

## REACTION KINETICS AND MECHANISMS

The course is suitable for graduates in chemistry and/or physics.

Candidates accepted under the provisions of Article 17 of the Ordinance, may proceed by attending a course of advanced study which will include:

(a) a selection from lecture courses on the following topics:
Heterogeneous reactions
High polymer chemistry
The uses of radioactive and stable isotopes in kinetic studies
The application of spectroscopy to kinetic studies
Radiation chemistry and photochemistry
Flame and combustion
Free radical reactions in solution
Fast reactions
Reactions at electrodes
Aspects of thermochemistry related to kinetic studies
Other courses of lectures approved by the head of department
(b) seminar and project work on the lecture courses
(c) practical work consisting of:
Glassblowing and workshop practice courses
A laboratory course of advanced experiments in chemical kinetics and mechanisms
(d) the carrying through of an individual project involving some of the techniques included in the course of advanced study, and the preparation of a short dissertation thereon.

The examination will consist of an assessment of the candidate's work during the course and of his dissertation on the research topic; an oral examination may be given.

## GEOCHEMISTRY

The course is designed for graduates in geology who have taken subsidiary chemistry, for graduates in chemistry who have a suitable geological background, and for graduates in general studies or in chemistry and geology (combined).

Candidates accepted under the provisions of Article 17 of the Ordinance, may proceed by:

(a) attending a course of advanced study including about 100 lectures, together with seminars and colloquia; in 1964-65 lectures on the following will be offered*:

| | |
|---|---|
| Geochemical processes and principles | approximately 40 lectures |
| Special topics in geochemistry | approximately 30 lectures |
| Geochemical techniques | approximately 12 lectures |
| Mineralogical techniques | approximately 20 lectures |

(b) attending a course of practical work extending over 25 weeks
(c) carrying through and preparing a short dissertation on an individual project involving some of the techniques included in the course of advanced study.

The examination will normally consist of written papers and assessment of the dissertation, and of other work undertaken during the course.

*Candidates may also be required to attend additional lectures in the geology department and/or other departments.

## *GEOPHYSICS

Candidates accepted under the provisions of Article 17 of the Ordinance will proceed by:

(a) attending a scheme of advanced study which will include about 120 lectures on the following topics:

(i) General introduction to geophysics and its application in prospecting and earth structure.

(ii) Gravitational, magnetic, electrical, seismic, well-logging, radioactive and thermal methods of investigation.

(iii) Geodynamics.

(b) attending a course of practical work;

(c) carrying through an individual project on some aspect of geophysics.

The examination will consist of:

Three written papers of 3 hours each;
A dissertation relating to the project on some aspect of geophysics.

## MOLECULAR BIOLOGY

The course is designed for graduates in the biological sciences including medicine.

Candidates accepted under the provisions of Article 17 of the Ordinance, may proceed by:

(a) attending a course of advanced study including about 100 lectures; in 1964-65 the following courses will be offered:

General introduction to molecular structure in biological systems —8 lectures
Methods of investigation—approximately 50 lectures
Selected topics—approximately 30 lectures

(b) attending a course of practical work

(c) carrying through a project on e.g. the interpretation of a set of observations obtained by X-ray analysis, electron microscopy or infra-red spectroscopy.

The examination will consist of three papers of 3 hours each, one of which shall be an essay paper.

In recommending the award of the degree the examiners will take into account the performance of the candidate in the three papers together with an assessment of the work carried out by the candidate during the course, and the project carried out during the three terms and the summer vacation.

*This course has been arranged jointly by the departments of applied mineral sciences and geology; applications for admission to the course should be made in the first instance to the head of the department of applied mineral sciences.

## PHYSICS

Candidates accepted under the provisions of Article 17 of the Ordinance may proceed by:

(a) Attending a course of advanced study including about 100 lectures; in 1964-65 these will consist of about 50 lectures on quantum mechanics and statistical mechanics, together with about 50 lectures on

*either* (i) the electron theory of solids and special topics in solid state physics (*e.g.* ferromagnetism, low temperature phenomena, low temperature techniques)

*or* (ii) relativity and high-energy nuclear physics, electronics and fast counting techniques.

(b) Carrying out project work in experimental or theoretical physics

(c) Preparing a short dissertation on a particular topic.

The examination will normally consist of written papers and assessment of the dissertation and of other work undertaken during the course.

# COURSES IN THE FACULTY OF SCIENCE

The following pages give information concerning courses given in the Faculty of Science. The information is arranged by subjects and an indication is given, where a course is restricted to candidates following a particular degree scheme or schemes, of the degrees or other qualifications for which the course is normally attended.

The name of each course is given first and is followed by the year of the scheme of study in which the course is normally taken, followed by the days and times, where these are sufficiently firmly established, at which lectures are normally given. There is a brief indication of the content of the course and finally, where appropriate, particulars of the examination set on the subject matter.

A second-year course normally requires a previous satisfactory performance in a corresponding first-year course or exemption therefrom. When the requirement for admission to a second-year course is an approved standard of attainment in one or more *related* subjects, these are specified. Third- and fourth-year courses normally require previous satisfactory performances in the corresponding second- and third-year courses respectively. Examinations set in connection with such courses are usually of wider scope than the content of the individual course.

## MATHEMATICS AND STATISTICS

MATHEMATICS 1A*

First year; Monday, Tuesday, Wednesday and Friday, 9 to 10.

Algebra, calculus, geometry, statics and dynamics.

Examination : 2 papers.

MATHEMATICS 1Z

First year; Tuesday 4 to 5 and Wednesday 9 to 10 (pure), and Monday 9 to 10 (applied).

Fundamental formulae of trigonometry and algebra; analytical geometry; calculus. Elementary statics and dynamics.

This course is designed as a supplementary course in mathematics for students who are not expecting to proceed to more advanced courses in mathematics in the University.

Examination: 1 paper on pure mathematics and 1 on applied.

STATISTICS 2Z

Second year; Wednesday and Friday, 9 to 10.

Elementary treatment of statistical data; introduction to problems of sampling.

Normally Mathematics 1A or exemption therefrom is an admission requirement for this course. Completion of the course does not qualify a student to proceed to further courses in statistics in the University.

Examination: 1 paper.

*Exemption from Mathematics 1A may be granted on the basis of a good performance in mathematics as one subject, or of a pass in mathematics as two subjects, at the Advanced level in the General Certificate of Education examination, provided that mathematics includes both pure and applied mathematics.

*For the degree of Bachelor of Science in two main subjetcs combined*

MATHEMATICS 2A

Second year; Monday, Wednesday and Friday, 12 to 1 (pure); Tuesday and Thursday, 12 to 1 (applied).
Algebra, calculus, analysis, three-dimensional geometry, statics, dynamics.
Examination: 2 papers.

MATHEMATICS 3A

Third year; Monday, Wednesday and Friday, 10 to 11 and 12 to 1.
Geometry of conics and quadrics, advanced calculus, real variable analysis, elementary complex variable analysis; vector analysis, elementary hydrodynamics, dynamics of a rigid body.
Examination: 3 papers covering both Mathematics 2A and Mathematics 3A.

MATHEMATICS 4A

Fourth year; 5 hours a week at times to be arranged.
Selected topics in pure mathematics, applied mathematics, and numerical analysis.
Examination: 4 papers covering Mathematics 2A, 3A and 4A.

STATISTICS 2A

Second year; Monday, Tuesday, Wednesday and Friday, 9 to 10.
Elementary treatment of statistical data; introduction to problems of sampling.
Candidates taking Statistics 2A must either have passed or been granted exemption from Mathematics 1A or have reached a satisfactory standard in pure mathematics at the Advanced level in the General Certificate of Education examination.
Examination: 2 papers.

STATISTICS 3A

Third year; Tuesday and Thursday, 10 to 11; Friday, 3 to 5; and one other hour to be arranged.
Analysis of variation, sampling theory of Gaussian distribution, interpretation of experimental data and arrangement of field trials, merits of alternative sampling schemes, correlation, statistical computation.
Examination: 2 papers.

STATISTICS 4A

Fourth year; Tuesday and Thursday, 10 to 11; Friday, 9 to 10; Monday, 2 to 5; and other times to be arranged in consultation with the Electronic Computing Laboratory.

*For the degree of Bachelor of Science in mathematics*

MATHEMATICS 1MM

9 hours a week and tutorial classes at times to be arranged.
Algebra, calculus, analysis, geometry, statics, dynamics, statistics.
Examination: 3 papers.

MATHEMATICS 2MM

11 hours a week and tutorial classes at times to be arranged.
Algebra, calculus, analysis, geometry, statics, dynamics, statistics.
Examination: 4 papers.

MATHEMATICS 3MM

12 hours a week and tutorial classes at times to be arranged.
Algebra, calculus, analysis, geometry, theory of potential, three-dimensional statics, dynamics, functions of mathematical physics, history of mathematics. For selected students there are, in addition to the above, lectures on statistics, numerical analysis and mathematical logic.
Examination: 4 papers plus 1 paper on the additional lectures. During the year candidates will also be given a test on the history of mathematics.

MATHEMATICS 4MM

10 hours a week and tutorial classes at times to be arranged.
Analysis, electromagnetism or hydrodynamics, and three other courses selected in consultation with the head of the department of mathematics from a list which in any one year may include higher analysis, abstract algebra, geometry, higher differential geometry, topology, mathematical logic, electromagnetism*, hydrodynamics*, advanced dynamics and statistical mechanics, quantum theory, relativity, elasticity, aircraft dynamics, astronomy, mathematical methods, numerical analysis, statistics. (The choice and content of courses selected may depend upon whether or not the additional lectures in Mathematics 3MM were taken.)
Examination: 5 papers. (In assessing the result of the final examination the candidate's performance in the Mathematics 3MM examination will be taken into account.)

*For the degree of Bachelor of Science in physics*

MATHEMATICS 2PX

Second year; Monday, Tuesday, Wednesday, Thursday and Friday, 12 to 1.
Algebra, calculus including elementary differential equations and Fourier series, elementary analytical geometry of three dimensions; vectors, statics, particle and rigid dynamics.
Examination: 2 papers.

MATHEMATICS 3PX

Third year; Monday, Wednesday and Friday, 10 to 11 and 12 to 1.
Some or all of: Multiple integrals, differential equations, special functions of mathematical physics, vector and tensor analysis, matrices, functions of a complex variable, higher dynamics, numerical analysis, special theory of relativity.
Examination: 3 papers.

***If not already taken as a compulsory course.**

*For the degree of Bachelor of Science in chemistry*

MATHEMATICS 2CH
Second year; 3 hours a week at times to be arranged.
Calculus including differential equations and Fourier series, complex numbers, determinants, analytical geometry of three dimensions.
Examination: 1 paper.

*For the degree of Bachelor of Science in applied science*

MATHEMATICS 2T
Second year; *either* Monday, Tuesday, Wednesday, Thursday and Friday 9 to 10;
*or* Monday, Wednesday and Friday, 10 to 11, and Tuesday and Thursday, 12 to 1.
Complex numbers, calculus, differential equations, infinite series; vectors and their applications to geometry and particle and rigid body dynamics; computation.
Examination: 3 papers.

MATHEMATICS 2U
Second year; Monday, Wednesday and Friday, 10 to 11.
Complex numbers, calculus, differential equations, determinants; computation.
Examination: 2 papers.

MATHEMATICS 3T
Third year; Monday, Tuesday, Wednesday and Thursday, 10 to 11, or at other times as arranged.
Selected topics in complex variables, differential equations, vector analysis, statistics, matrix algebra and electronic computation.

MATHEMATICS 4T
Two hours a week at times to be arranged.
Topics selected in consultation with departments of the Faculty of Technology.
Examination: 1 paper.

*For the diploma in public health*

STATISTICS PDH
2 hours a week at times to be arranged for 2 terms only.
Medical uses of elementary statistical methods.

## PHYSICS

PHYSICS 1A
First year; Tuesday, 10 to 11 or 12 to 1; Thursday, 10 to 11 or 12 to 1; Friday, 2 to 3, or Saturday, 10 to 11; and 3 hours' a week laboratory work at times to be arranged. The same times for lectures and laboratory work must be adhered to throughout the session.
The course, which includes experimental demonstrations, covers the main branches of physics in an elementary manner under the headings: matter and motion; heat, light and atoms; electricity and magnetism.

The course is suitable for those who have, before entry, studied physics up to the Advanced level in the General Certificate of Education and mathematics at least up to the Ordinary level.
Examination: 1 paper and laboratory work during the course.

PHYSICS 2A
Second year; Monday, Tuesday and Wednesday, 11 to 12; Thursday, 2 to 5; Friday, 11 to 12 and 2 to 4.
This course is provided for students in combined schemes of study who expect to proceed to further courses in physics. The main topics dealt with are: electricity, vibrations and waves, mechanical and thermal properties of matter, and atomic physics.
Examination: 2 papers and laboratory work during the course.

PHYSICS 2B
Second year; Monday, Wednesday and Friday, 11 to 12; and a minimum of 3 hours' a week laboratory work at times to be arranged.
A course providing a general survey of the main fields of classical and modern physics complete in itself.
Examination: 2 papers and laboratory work during the course.

PHYSICS 3A
Third year: Monday and Friday, 2 to 3; Thursday, 11 to 12; and 5 hours' a week laboratory work at times to be arranged.
The themes introduced in Physics 2A, namely matter and energy, waves and particles, electricity, are developed and extended.
Examination: 2 papers covering Physics 2A and Physics 3A, and laboratory work during the course.

PHYSICS 4A
Fourth year; 3 lecture hours and 5 hours' a week laboratory work at times to be arranged.
Certain sections of the PX courses below and other lectures are prescribed to meet the needs and interests of individual students.
Examination: 3 papers covering Physics 2A, Physics 3A and Physics 4A, and laboratory work during the course.

*For the degree of Bachelor of Science in physics*

PHYSICS 2PX
Second year; Monday, Wednesday and Friday, 11 to 12; Tuesday, 2 to 3; 8 hours' a week laboratory work and tutorial classes at times to be arranged.
Atomic and molar physics, vibrations and wave optics, electricity and magnetism, heat.
Examination: 2 papers and exercises and laboratory work during the course.

PHYSICS 3PX
Third year; Monday, 9 to 10; Monday, Tuesday, Wednesday and Friday, 11 to 12; Tuesday, 10 to 11; and 10 hours' a week laboratory work including Thursday, 9 to 1 and 2 to 5.

Thermodynamics, electricity and electronics, mechanical, electrical and magnetic properties of matter, optics, atomic and nuclear physics.
Examination: 2 papers and exercises and laboratory work during the course.

PHYSICS 4PX
Fourth year; 6 lectures and 12 hours' a week laboratory work at times to be arranged.
Quantum mechanics, statistical mechanics, nuclear physics, electromagnetic theory, electronics and principles of design, radiation physics.
Examination: 4 papers and exercises and laboratory work during the course.

*For the degree of Bachelor of Science in applied science*

PHYSICS 2T
First or 2nd year; Tuesday, Thursday and Friday, 12 to 1; and 3 hours' a week laboratory work at times to be arranged; classes to be held in the Houldsworth School.
Matter, waves and electricity.
Examination: 2 papers and laboratory work during the course.

*For the degree of Bachelor of Science in electrical engineering*

PHYSICS 2EE
First or 2nd year; Tuesday, 10 to 11; Friday, 11 to 12; and a tutorial class fortnightly on Tuesday, 11 to 12.
The physical basis of the properties of electrical engineering materials.
Examination: 1 paper.

*For the degree of Bachelor of Music*

PHYSICS 1MU
First or 2nd years; Thursday, 2 to 3.
The physical basis of music approached experimentally rather than mathematically.

## CHEMISTRY

CHEMISTRY 1A
First year; Monday, Wednesday and Friday, 12 to 1; and laboratory work at times to be arranged.
Examination: 1 paper and assessment of the year's practical work; the examiners may additionally require a practical examination.

CHEMISTRY 1B
First year; Tuesday, 11 to 12; Thursday and Saturday, 9 to 10; and laboratory work at times to be arranged.
Examination: 1 paper and assessment of the year's practical work; the examiners may additionally require a practical examination.

Candidates who have passed in chemistry and in either physics or mathematics at the Advanced level in the examination for the General Certificate of Education will normally take Chemistry 1B, if their timetable permits. Other candidates will normally take Chemistry 1A. For either course, candidates will be required to satisfy the examiners in both the inorganic and physical and in the organic chemistry sections of the written paper.

CHEMISTRY 2A
Second year; Tuesday, Thursday and Saturday, 10 to 11; laboratory work and, for students following a combined scheme of study, tutorial classes or seminars at times to be arranged.
A course in general, inorganic, and physical chemistry.
Candidates are recommended to obtain a knowledge of elementary physics before taking this course. A knowledge of elementary calculus will also be assumed.
Examination: 1 paper and assessment of the year's practical work; the examiners may additionally require a practical examination.

CHEMISTRY 2B
Second year; 1st term: Tuesday, Thursday and Saturday, 10 to 11; 2nd and 3rd terms: Tuesday and Thursday, 12 to 1, Friday, 4 to 5; laboratory work and, for students following a combined scheme of study, tutorial classes or seminars at times to be arranged.
A course in general, inorganic, and organic chemistry.
Examination: 1 paper and assessment of the year's practical work; the examiners may additionally require a practical examination.

CHEMISTRY 2D
Second year; Tuesday, Thursday and Saturday, 10 to 11; and laboratory work at times to be arranged.
A course in general, inorganic, and physical chemistry. The course contains a rather greater proportion of physical chemistry than Chemistry 2A.
Candidates are recommended to obtain a knowledge of elementary physics before taking this course. A knowledge of elementary calculus will also be assumed.
Examination: 1 paper and assessment of the year's practical work; the examiners may additionally require a practical examination.

CHEMISTRY 3A
Third year; 1st term: Tuesday, Thursday and Saturday, 10 to 11; 2nd and 3rd terms: Tuesday and Thursday, 12 to 1, Friday, 4 to 5; laboratory work and, for students following a combined scheme of study, tutorial classes or seminars at times to be arranged.
A course in physical and organic chemistry requiring previous attendance at Chemistry 2A, or, for the purposes of certain schemes of study, Chemistry 2D.
Examination: 1 paper and assessment of practical work; the examiners may additionally require a practical examination.

CHEMISTRY 3B
Third year; 1st term: Monday, Wednesday and Friday, 10 to 11; 2nd and 3rd terms: Tuesday, Thursday and Saturday, 10 to 11; laboratory work and, for students following a combined scheme of study, tutorial classes or seminars at times to be arranged.
A course in organic, physical, and inorganic chemistry requiring previous attendance at Chemistry 2B.
Candidates are recommended to obtain a knowledge of elementary physics before taking this course. A knowledge of elementary calculus will also be assumed.
Examination: 1 paper and assessment of practical work; the examiners may additionally require a practical examination.

CHEMISTRY 3C
Third year; 1st term: Monday, Wednesday and Friday, 10 to 11; 2nd and 3rd terms: Tuesday, Thursday and Saturday, 10 to 11; and laboratory work at times to be arranged.
A course in organic and physical chemistry requiring previous attendance at Chemistry 2B. Completion of this course will not normally qualify a student to proceed to further courses in chemistry.
Candidates are recommended to obtain a knowledge of elementary physics before taking this course. A knowledge of elementary calculus will also be assumed.
Examination: 1 paper and assessment of practical work; the examiners may additionally require a practical examination.

CHEMISTRY 3D
Second and third years; commencing January and finishing December. Spring and Summer terms: Tuesday and Thursday, 12 to 1; Friday, 4 to 5; Autumn term: Monday, Wednesday and Friday, 10 to 11; and laboratory work at times to be arranged.
A course in organic chemistry requiring previous attendance at the first term of Chemistry 2A, 2B or 2D.
Examination to be held in January: 1 paper and assessment of practical work; the examiners may additionally require a practical examination.

CHEMISTRY 3E
Second or third year; Tuesday and Thursday, 12 to 1; Friday, 4 to 5; and laboratory work at times to be arranged.
A one-year course in organic chemistry normally taken in conjunction with one of the following second-year courses in chemistry: Chemistry 2A, 2D or 2T.
Examination: 1 paper and assessment of practical work; the examiners may additionally require a practical examination.

CHEMISTRY 4A
Fourth year; 1st term: Monday, Wednesday and Friday, 10 to 11; 2nd and 3rd terms: Tuesday, Thursday and Saturday, 10 to 11; laboratory work and,

for students following a combined scheme of study, tutorial classes or seminars at times to be arranged.
A course in organic, inorganic, and physical chemistry requiring previous attendance at Chemistry 3A.
Examination: Final-year candidates for the degree of Bachelor of Science in two main subjects combined will be examined in 3 papers which will cover the work of the three-year course incorporating Chemistry 2A, 3A and 4A, with assessment of the practical work; the examiners may additionally require a practical examination.

CHEMISTRY 4B
Third or fourth year; Tuesday, Thursday and Saturday, 10 to 11; laboratory work and, for students following a combined scheme of study, tutorial classes or seminars at times to be arranged.
A course in physical and inorganic chemistry requiring previous attendance at Chemistry 2A or 3B. Students following a combined scheme of study are additionally required to attend lectures in organic chemistry in the first term.
Examination: 1 paper and assessment of practical work; the examiners may additionally require a practical examination. Final-year candidates for the degree of Bachelor of Science in two main subjects combined will be examined in 3 papers which will cover the work of the three-year course incorporating Chemistry 2B, 3B and 4B.

*For the degree of Bachelor of Science in chemistry*
CHEMISTRY 2CH
Second year.
Inorganic and structural: Monday and Friday, 10 to 11
Physical: Thursday, 12 to 1; and Saturday, 9 to 10
Organic: Wednesday, 10 to 11; Thursday, 11 to 12.
Examination: 3 papers.

CHEMISTRY 3CH
Third year.
Inorganic: Tuesday and Friday, 9 to 10; Wednesday, 10 to 11
Physical: Tuesday and Thursday, 11 to 12; Friday, 10 to 11
Organic: Monday and Wednesday, 9 to 10.
Examination: 3 papers.

CHEMISTRY 4CH
Fourth year.
Inorganic and physical: Monday and Wednesday, 9 to 10; Tuesday, 11 to 12; one hour per week during the second term will be devoted to an informal seminar.
Organic: Monday and Wednesday, 11 to 12; Tuesday, 9 to 10.
Final examination: 6 papers and assessment of practical work.
Laboratory work and tutorial classes associated with Chemistry 2CH, 3CH and 4CH, at times to be arranged.

*For the degree of Bachelor of Science in applied science*

CHEMISTRY 2T

Second year: Tuesday, Thursday and Saturday, 10 to 11; and laboratory work at times to be arranged. The practical work is not less than an average of 4 hours a week for one session, or for two half-sessions. (Practical work for metallurgy students will be carried out in the department of metallurgy.)

A course in physical chemistry.

Examination: 1 paper, and assessment of the year's practical work.

CHEMISTRY 3T

Third year; Tuesday, Thursday and Saturday, 10 to 11.

A course in chemical thermodynamics requiring previous attendance at Chemistry 2T.

Examination: 1 paper.

*For the degree of Bachelor of Science in applied science (chemical engineering)*

CHEMISTRY 3CE

Second or third year: Tuesday and Thursday, 12 to 1; Friday, 4 to 5 (42 lectures); and laboratory work at times to be arranged.

A course in organic chemistry, normally taken with or after Chemistry 2T.

Examination: 1 paper, and assessment of the year's practical work; the examiners may additionally require a practical examination.

*For the degree of Bachelor of Dental Surgery and the diploma in dental surgery*

CHEMISTRY AND PHYSICS OF DENTAL MATERIALS

Third year; Tuesday, 2 to 3; and laboratory work at times to be arranged.
A special course in chemistry, ceramics and metallurgy, given in collaboration with the Houldsworth School.
Examination: 1 paper, and assessment of practical work.

## BOTANY

BOTANY 1A

First year; Tuesday, 2 to 5 and Thursday, 9 to 10, 11 to 1.
Life cycles of annual and perennial plants, vegetative propagation, sexual reproduction; morphology, anatomy and physiology of herbaceous and woody plants; special nutrition; life cycles of some lower plants; introduction to cytology, genetics and taxonomy.
Examination: 1 paper and a practical examination.

BOTANY 1B

First year; Tuesday and Thursday, 9 to 10, and *either* 11 to 1 *or* 10 to 12.
Form, structure, development and life history of some illustrative examples of lower and higher plants together with an elementary introduction to experimental physiology and the principles of classification.
Examination: 1 paper and a practical examination.

BOTANY 2A

Second year; Monday and Friday, 9 to 10; Wednesday, 10 to 11; and laboratory work Monday, 10 to 1, *or* 2 to 5; Friday, 10 to 1 *or* 2 to 5.

The course will have one of the following two syllabuses, which are given in alternate years:

(a) comparative morphology of fungi and algae (including a field course at a marine station in the Easter vacation); angiosperm anatomy; physiology of growth and water and solute relations; cytology and heredity

(b) comparative anatomy and morphology of bryophyta, pteridophyta, gymnosperms; physiology of growth and metabolism;

*and*, in the summer term ecology and systematics, with a field course at the end of the summer term.

The first part of the course will have syllabus (a) in 1964-5.

Examination: 1 paper and a practical examination.

BOTANY 3A

Third year; Monday and Friday, 9 to 10; Wednesday, 10 to 11; and laboratory work Monday, 10 to 1 *or* 2 to 5; Friday, 10 to 1 *or* 2 to 5.

The course will have one of the two syllabuses described above for Botany 2A, i.e. (a) or (b) according to the year; *and*, in the summer term, green algae.

The first part of the course will have syllabus (a) in 1964-5.

Examination: For students proceeding to further courses in botany, 1 paper and 1 practical examination; for other students, 3 papers and 3 practical examinations covering the successive courses Botany 2A and 3A.

BOTANY 3B

Third year; Monday and Friday, 3 to 4; and 6 hours a week laboratory work at times to be arranged.

The course will have one of the following two syllabuses, which are given in alternate years:

(a) advanced genetics, plant biophysics, algal cytology and fine structure.

(b) growth and metabolism, plant geography past and present, elementary plant pathology, cytochemistry, physiology of membranes.

The second alternative will be given in 1964-5.

The course must be taken at the same time as Botany 3A.

Examination: normally deferred until the completion of Botany 4A.

BOTANY 4A

Fourth year; Monday and Friday, 3 to 4; and 6 hours a week laboratory work at times to be arranged.

The course will have one of the two syllabuses as given above for Botany 3B, i.e. (a) or (b) according to the year.

Examination: to be arranged.

*For the degree of Bachelor of Science in botany*

BOTANY 3BT

Third year.
The course includes Botany 3A and Botany 3B.
Examination: 1 paper and a practical examination.

BOTANY 4BT

Fourth year.
The course includes Botany 4A and intensive short courses in selected topics, together with a special short course in plant pathology in the department of agriculture and attendance at a special course in statistics for students of biology in the department of mathematics.
Examination: 6 papers and 4 practical examinations.

## BIOPHYSICS

BIOPHYSICS 1A

First year; Monday and Friday, 10 to 11; Wednesday 11 to 12; Thursday, 10 to 1 or 2 to 5.
The course covers the main branches of physics in an elementary manner, taught throughout with emphasis on the relevance to biology, under the headings: general properties of matter, heat, electricity and magnetism, light, quantum physics.
The course is suitable for those who have, before entry, studied physics and biology or botany or zoology up to the advanced level in the General Certificate of Education and mathematics at least up to the ordinary level.
Examination: 1 paper and assessment of laboratory work during the course.

BIOPHYSICS 4A

Third year; second and third terms only. Twenty lectures together with practical periods at times to be arranged.
A subsidiary course dealing with the physical examination of biological macromolecules.
Examination: 1 paper.

BIOPHYSICS 4B

Third year; three lectures and two laboratory periods per week at times to be arranged.
The chemistry of biological macromolecules and their units with emphasis on structure and function.
Examination: 2 papers.

BIOPHYSICS 5A

Fourth year; two lectures per week with tutorials; laboratory work at times to be arranged.
The physics of macromolecules. Physico-chemical methods of investigation of biological macromolecules. Biological implications of the results.
The course requires previous attendance at Physics 4A and Biophysics 4A.
Examination: 4 papers and an oral examination.

BIOPHYSICS 5B
Fourth-year; two lectures per week with tutorials; laboratory work at times to be arranged.
Specialised topics in the chemistry of biological macromolecules.
The course requires previous attendance at Biophysics 4B.
Examination: 4 papers and an oral examination.

BIOPHYSICS 5C
Fourth year; 20 lectures; laboratory work at periods to be arranged.
A subsidiary course dealing with the more chemical examination of biological macromolecules.
Examination: 1 paper.

## ZOOLOGY

ZOOLOGY 1A
First year; lectures, Monday and Friday, 11 to 12; with laboratory work *either* Tuesday, 2 to 4, and Wednesday, 10 to 12 (for B.Sc. in zoology, B.Sc. in two subjects combined and B.Sc. Honours in the agricultural sciences) *or* Monday and Thursday, 2 to 4 (for 1st M.B., Ch.B., 1st B.Ch.D., and B.Sc. in agriculture).
Examination: 1 paper and a practical examination.

ZOOLOGY 2A
Second year; lectures, Wednesday, 9 to 10; Tuesday and Thursday, 11 to 12; laboratory work, Tuesday, 2 to 5 and Saturday, 9 to 12.
Systematic and comparative anatomy of invertebrates; evolutionary theory, animal physiology, experimental zoology and ecology.
Examination: 1 paper and a practical examination.

ZOOLOGY 3A
Third year; lectures, Wednesday, 9 to 10; Tuesday and Thursday, 11 to 12; laboratory work, Tuesday and Thursday, 2 to 5.
Systematic and comparative anatomy of vertebrates; evolution, cytology and genetics, animal behaviour and embryology.
Examination: 1 paper and a practical examination.

ZOOLOGY 3B
Third year; Tuesday, 10 to 11; Wednesday, 11 to 12; laboratory work, Monday and Friday, 2 to 5.
This course has either of two contents which are given in alternate years:
(a) advanced work in ecology, behaviour, histology, entomology, biophysics and mycology; *or*
(b) advanced work in parasitology, endocrinology, marine zoology, metamorphosis, evolution and histology.
Zoology 3B must be taken at the same time as Zoology 3A.
Examination: 1 paper and a practical examination.

ZOOLOGY 4A
Fourth year; lectures, Tuesday, 10 to 11, Wednesday, 11 to 12; laboratory work, Monday and Friday, 2 to 5, and additional times to be arranged. The course has either of two contents which are given in alternate years, as described for Zoology 3B, together with additional advanced studies.
Examination: 3 papers.

*For the degree of Bachelor of Science in zoology*

ZOOLOGY 3ZO
Third year.
The course comprises the contents of Zoology 3A and Zoology 3B, with times as above, except that a course in agricultural zoology is substituted for the Zoology 3B content for those students specialising in agricultural zoology.
Examination: 2 papers and 2 practical examinations.

ZOOLOGY 4ZO
Fourth year.
The course includes the alternative content of Zoology 3B not taken in the third year, with additional advanced studies more extensive than those of Zoology 4A.
Examination: 4 papers and 2 practical examinations.

*For the diploma in public health*

ZOOLOGY PDH
Day, and time to be arranged.
A course in parasitology and genetics.

## GEOLOGY

GEOLOGY 1C
First year; Monday and Friday, 10 to 11 (lecture) and *either* 11 to 1, *or* 2 to 4 (laboratory).
An introduction to the principles of geology.
Examination: 1 paper and a practical examination.

GEOLOGY 2C
Second year; 8 hours a week at times to be arranged.
Dynamical geology, optical mineralogy, palaeontology, petrology, economic geology, geochemistry and map interpretation.
Examination: 2 papers and 2 practical examinations.

*For the degree of Bachelor of Science in two main subjects combined, or in geology as one main subject*

GEOLOGY 2A
Second year; 9 hours a week at times to be arranged.
Physical geology, mineralogy, palaeontology and stratigraphy, map interpretation.
This course does *not* require previous attendance at Geology 1C, but requires a pass in, or exemption from, the first-year course in chemistry.
Examination: 2 papers and 2 practical examinations.

GEOLOGY 3A
Third year; 9 hours a week at times to be arranged.
Igneous and metamorphic petrology; structural geology.
Examination: 2 papers and 2 practical examinations.

GEOLOGY 3B
Third year; 9 hours a week at times to be arranged.
Sedimentology, palaeontology, stratigraphy, map interpretation.
This course may be taken in conjunction with, or as alternative to Geology 3A by candidates for the degree in two main subjects combined.
Examination: 2 papers and 2 practical examinations.

GEOLOGY 4A
Fourth year; 9 hours a week at times to be arranged.
Petrogenesis, geochemistry, advanced mineralogy.
This course requires previous attendance at Geology 3A.
Examination: 2 papers and 2 practical examinations.

GEOLOGY 4B
Fourth year; 9 hours a week at times to be arranged.
Physics of the earth's crust.
This course may be taken as an alternative to Geology 4A by candidates for the degree in two main subjects combined.
Examination: 2 papers and 2 practical examinations.

The above courses will include field instruction and supervised independent field work during the vacations; a report on a geological survey of a specific area is to be submitted as part of the final degree examinations.

*For the degree of Bachelor of Science in geology*

GEOLOGY 3GL
Third year; at times to be arranged.
The course will include Geology 3A and Geology 3B, with field work.
Examination: 4 papers and 4 practical examinations.

GEOLOGY 4GL
Fourth year; at times to be arranged.
The course will consist of Geology 4A and Geology 4B and will include field work. Other short courses which may be substituted for part of 4A or 4B will also be available.
Examination: 4 papers and 4 practical examinations; a report on a geological survey of a specific area is to be submitted as part of the final examination.

*For the degree of Bachelor of Science in applied science (mineral science)*

MINERALOGY 1AM
First year; 4 hours a week at times to be arranged.
General mineralogy and crystallography.
Examination: 1 paper and a practical examination.

MINERALOGY 2AM
Third year; 5 hours a week at times to be arranged.
Systematic, determinative and paragenetic mineralogy.
Examination: 1 paper and a practical examination.

*For the degree of Bachelor of Science in applied science (mining)*

GEOLOGY 1MI

First year; 5 hours a week at times to be arranged.
An introduction to the principles of geology and mineralogy.
Examination: 1 paper and a practical examination.

GEOLOGY 2MI

Second year; 7 hours a week at times to be arranged.
Economic and applied geology.
Examination: 2 papers and a practical examination.

*For the degree of Bachelor of Science in applied science (ceramics)*

GEOLOGY 1CR

Third year; 4 hours a week at times to be arranged.
General mineralogy and crystallography; microscopic techniques; petrography.
Examination: 1 paper and a practical examination.

*For the degree of Bachelor of Science in applied science (civil engineering)*

GEOLOGY 1CV

4 hours a week: lectures, Thursday, 9 to 10 and 2 to 3; laboratory, Wednesday, 11 to 1 or Thursday, 3 to 5.
An introduction to the principles of geology with emphasis on its application to engineering problems.
Examination: 1 paper and a practical examination.

GEOLOGY 2CV

A course for students who have passed 1CV is offered by the department of geology to civil engineers in their 3rd year. For Honours degree students the course will count as both a IIIC and a IVC option; for Ordinary degree students the course will count as a IIIC option only.
Selected topics of special interest to civil engineers will be taken to an advanced level and considerable emphasis will be placed on field work.

The course will consist of one lecture and two hours practical work a week, together with Saturday and Easter field classes.

EXAMINATIONS

Honours degree students: one 3 hour written paper and one 3 hour practical paper.
Ordinary degree students: one 3 hour written paper.

*For the postgraduate diploma in applied geophysics*

GEOLOGY PMG

2 hours a week at a time to be arranged.
Principles and techniques of structural geology.

## GEOGRAPHY

*For the degree of Bachelor of Science in two main subjects combined*

GEOGRAPHY 2A

Second year; Wednesday, 11 to 12; Thursday, 2 to 3; Friday, 2 to 3; practical work, Tuesday, 2 to 5; and tutorials at times to be arranged.
Cartography, human geography, physical geography.
Examination: 4 three-hour papers.

GEOGRAPHY 3A

Third year; Wednesday, 9 to 10; Thursday, 9 to 10, 11 to 12, and 12 to 1; Friday 11 to 12; practical work Monday, 2 to 5; and tutorials at times to be arranged.
Vegetation, climate and soils; social geography; cartography and surveying; geomorphology; geography of the British Isles.

GEOGRAPHY 4A

Fourth year; 5 hours of lectures a week; tutorials and seminars at times to be arranged.
Examination: 5 three-hour papers.

*For the degree of Bachelor of Science in geography*

GEOGRAPHY 2GG

First year; Wednesday, 11 to 12; Thursday, 2 to 3; Friday, 2 to 3; practical work, Tuesday 2 to 5; tutorials at times to be arranged.
Elements of physical and human geography; cartography.
Examination: 4 three-hour papers.

GEOGRAPHY 3GG

Second year; 9 lecture hours and 3 hours practical work a week; tutorials and seminars at times to be arranged.
Social geography, political geography, economic geography, development of geographical thought, geomorphology, climate vegetation and soils, historical geography of Europe, geography of the British Isles, cartography and topographical surveying.

GEOGRAPHY 4GG

Third year; lectures, practical work, tutorials and seminars at times to be arranged.
Urban geography, geography of Europe, geography of a selected major world area, and two selected special aspects of geography.
Examination: 8 three-hour papers. Candidates may be required to present themselves for an oral examination.

## PSYCHOLOGY

PSYCHOLOGY 1C

First year; Monday, 10 to 11 and 3 to 4; Thursday, 2 to 4; experimental exercises and tutorials at times to be arranged.
An introduction to psychology; the study of human behaviour by empirical methods.
Examination: 2 papers.

*For the degree of Bachelor of Arts in psychology and sociology (combined)*

PSYCHOLOGY 1J
First year; Monday, 10 to 11 and 3 to 4; Thursday, 2 to 4; experimental exercises and tutorials at times to be arranged.
An introduction to psychology; the study of human behaviour by empirical methods.

PSYCHOLOGY 2J
PSYCHOLOGY 2K
PSYCHOLOGY 2L
PSYCHOLOGY 2M
Second year; lectures, tutorials and practical exercises at times to be arranged.
Courses of different weight with a common basis of general, social, mathematical and applied psychology. Up to three additional topics in psychology may be taken from the following: memory and learning; personality and human development; mental subnormality and abnormality; language and thinking; philosophical and historical issues.

PSYCHOLOGY 3J
PSYCHOLOGY 3K
PSYCHOLOGY 3L
PSYCHOLOGY 3M
Third year; lectures, tutorials and practical exercises at times to be arranged.
A continuation of the study of selected topics as given for the second year. Certain items may be taken either in the second or in the third year according to availability.
Examination: 4 compulsory papers; up to 3 papers on the special options.

*For the degree of Bachelor of Science in two main subjects combined*

PSYCHOLOGY 2A
Second year; Monday and Friday, 10 to 11; Monday, 3 to 4; Thursday, 2 to 4; and tutorial work for 1 hour a week at times to be arranged.
Biological psychology, psychometrics, social psychology and experimental psychology.
Examination: 2 papers.

PSYCHOLOGY 3A
Third year; Monday and Friday, 11 to 12; Tuesday, 12 to 1; and one of Monday, 2 to 3 or Saturday, 9 to 10; Tuesday, 9 to 10, Friday, 9 to 10; 3 hours of laboratory work and tutorial work for 1 hour a week at times to be arranged.
The course will have one of the following two syllabuses, which are given in alternate years:

(a) Mathematical psychology, genetics and human development, memory and learning, together with an option chosen from: the history and philosophy of psychology, language and thinking, educational psychology.

(b) Mathematical psychology, personality, behaviour theory, together with an option chosen from: recent history of psychology, communication, educational psychology.
Examination: 2 papers.

PSYCHOLOGY 4A
Fourth year; Monday and Tuesday, 12 to 1; Thursday, 9 to 10; Friday, 10 to 11 and 11 to 12; 3 hours of laboratory work and tutorial work for 1 hour a week at times to be arranged.

The course will have one of the following two syllabuses which are given in alternate years:

(a) Mathematical psychology, social psychology, perceptual functions, personality, behaviour theory.

(b) Mathematical psychology, social psychology, perceptual functions, genetics and human development, memory and learning.
Examination: 3 papers covering the content of psychology 2A, 3A and 4A, together with a practical examination. An oral examination may be required.

*For the degree of Bachelor of Science in psychology*

PSYCHOLOGY 1PS
First year; Monday, 10 to 11 and 3 to 4; Thursday, 2 to 4; experimental exercises and tutorials at times to be arranged.

An introduction to psychology; the study of human behaviour by empirical methods.

Examination: 2 papers.

PSYCHOLOGY 2PS
Second year; 9 hours lectures, laboratory exercises and tutorial classes at times to be arranged.

Examination: 2 papers.

PSYCHOLOGY 3PS
Third year; 10 hours lectures, practical exercises and tutorial classes at times to be arranged.

Examination: 2 papers.

PSYCHOLOGY 4PS
Fourth year; 10 hours lectures, practical exercises, tutorial classes and seminars at times to be arranged.

Examination: 6 papers, 3 practical examinations and an oral examination.

*For the degree of Master of Arts*

PSYCHOLOGY QMA
Monday 6.30 to 9.30; Saturday 9.30 to 12.30.
A three-year course leading to the degree of M.A. by examination. Main themes include: perception, learning, language, motivation, social and developmental factors, personality, history and applied techniques.

Examination: 6 papers and a minor dissertation.

## PHYSIOLOGY

Acceptance requirement: Passes in, or exemptions from, first-year courses in chemistry, physics and zoology are necessary before entering on any course in physiology.

PHYSIOLOGY 2A

Second year; lectures, Monday, Wednesday and Friday, 9 to 10; laboratory work, Tuesday and Thursday, 2 to 5.

A general survey of the physiology of the cell and of the problems arising when cells become organised into tissues, organs and animals, particularly of communication and control; an introduction to neurophysiology. The body fluids, respiration and circulation are discussed in detail.

This course cannot be taken alone and is intended for students who will proceed to Physiology 3A on satisfactory performance at the departmental examination held at the end of the session.

PHYSIOLOGY 2B

Second or 3rd years; lectures, Monday and Friday, 12 to 1; Thursday, 11 to 12; laboratory work, Monday and Thursday, 2 to 5.

This is a one-year course which provides a general survey of the main branches of animal and human physiology including the properties of blood, muscle, circulatory, respiratory and digestive systems as well as metabolism and regulation of activity by the endocrine and nervous systems.

This course may not be taken together with Biochemistry 2A. It does not qualify a student to proceed to Physiology 3A.

Examinations: 1 paper and a practical examination.

PHYSIOLOGY 3A

Third year; lectures, Monday, Wednesday and Friday, 9 to 10; laboratory work, Monday and Friday, 2 to 5.

The course covers disposal of the ingested food, more advanced neurophysiology and some examples of hormonal control in the body e.g. reproduction and growth. This course is complementary to Physiology 2A.

Examination: 2 papers and a practical examination covering the work of Physiology 2A and 3A.

PHYSIOLOGY 4A

Fourth year; to be arranged.

A course mainly on human physiology.

This course must be preceded by Physiology 2A and 3A.

*For the degree of Bachelor of Science in physiology*

PHYSIOLOGY 2FI

Second year; as for Physiology 2A.

PHYSIOLOGY 3FI

Third year; mainly as for Physiology 3A.

PHYSIOLOGY 4FI
Fourth year; lectures and practical work at times to be arranged.
The course entails the study of advanced experimental methods and the detailed study of some recent advances in the subject.
Examination: 4 papers, assessment of laboratory work, language test and an oral examination.

## ANATOMY

ANATOMY 2Z
Second year; at times to be arranged.
A short course in histology for science students.

*For the degree of Bachelor of Science in anatomy*

ANATOMY 2AT
Second year; at times to be arranged.
Systematic human anatomy, embryology, histology, neurology.

ANATOMY 3AT
Third year; at times to be arranged.
Systematic human anatomy, advanced embryology, histology.

ANATOMY 4AT
Fourth year; at times to be arranged.
Selected advanced topics in cytology, comparative morphology, modern techniques of histochemistry, tissue culture and other special fields.
Examination: 6 papers and an oral examination; a practical examination may be required.

*For the degree of Bachelor of Science in psychology*

ANATOMY 2PS
Second year; at times to be arranged.
A course in neuroanatomy.
Examination: 1 paper.

## BACTERIOLOGY

Acceptance requirements: A pass in, or exemption from, first-year chemistry is necessary for admission to the following courses. A knowledge of physics to a similar level is desirable.

BACTERIOLOGY 2A
Second year; Monday and Wednesday, 2 to 5; Thursday, 9 to 10; Friday, 2 to 4.
The biological characters of bacteria; their biochemical activities; immunology; a brief review of the organisms important in soil, food and water and in industry and medicine.
Examination: 2 papers and 2 practical examinations.

BACTERIOLOGY 3A
Third year; Monday and Friday, 10 to 1; Wednesday, 2 to 5.
Immunology, bacterial metabolism and genetics, agricultural bacteriology, viruses, mycology and microscopy.
Examination: 2 papers, 2 practical examinations, and an oral examination.

*For the degree of Bachelor of Science in bacteriology*

BACTERIOLOGY 4BY

Fourth year; at times to be arranged.
Selected advanced topics and research.
Examination: 3 papers, 3 practical examinations and an oral examination.

*For the degree of Bachelor of Science in applied science (leather science)*

BACTERIOLOGY 2LI

Second or 3rd year; First term only, Friday, 2 to 5.
An elementary course in bacteriology, with special reference to its application to problems in leather industries.

*For the degree of Bachelor of Science in pharmacology and in pharmacy*

BACTERIOLOGY 2FM

Second or 3rd year; Tuesday, 9 to 12.
An elementary course in bacteriology, with special reference to its application to problems in pharmacology and pharmacy.

## BIOCHEMISTRY

Acceptance requirements: A pass in, or exemption from, first-year chemistry is necessary for admission to any course in biochemistry.

BIOCHEMISTRY 2A

Second year; 2 lecture hours; laboratory work, *either* Tuesday *or* Thursday, 2 to 5.
A general survey of the metabolism of fats, proteins and carbohydrates, and of nutrition.
The course may not be taken together with Physiology 2A or 2B or 3A.
Examination: 1 paper. An oral examination may be required.

BIOCHEMISTRY 3A

Third year; 3 lecture hours; 5 hours' practical work, Thursday between 10 a.m. and 5 p.m.
A more detailed and extended study of the topics of Biochemistry 2A.
This course requires previous attendance at Biochemistry 2A or at Physiology 2A *and* 3A.
Examination: 2 papers. An oral examination may be required.

BIOCHEMISTRY 4A

Fourth year; 2 or 3 lecture hours; 5 hours' practical work: Tuesday between 10 a.m. and 5 p.m.
Selected topics in microbiological biochemistry.
This course normally requires previous attendance at Biochemistry 3A, but a student qualified to attend Biochemistry 3A may be permitted to attend Biochemistry 4A concurrently.
Examination: 2 papers. An oral examination may be required.

*For the degree of Bachelor of Science in biochemistry*

BIOCHEMISTRY 4BI

Third year; 4 lecture hours a week, laboratory work and tutorials at times to be arranged.
General biochemistry, physico-chemical aspects of biochemistry and an introduction to microbiological biochemistry.

BIOCHEMISTRY 5BI

Fourth year; 4 lecture hours a week, laboratory work and tutorials at times to be arranged.
Selected topics in medical biochemistry; extension of the study of physico-chemical aspects; plant biochemistry and microbiological biochemistry. Specialised practical work in one of these topics for one term and an individual practical investigation extending over one term.
Examination: 5 papers and an oral examination covering Biochemistry4BI and 5BI.

## PHARMACOLOGY AND PHARMACY

*For the degree of Bachelor of Science in pharmacology*

PHARMACOLOGY 3FM

Third year; 18 hours a week lectures, tutorials and practical work.
General and special pharmacology with emphasis on quantitative aspects. Pharmacological chemistry with special reference to the relation between structure and pharmacological action.
Examination; 2 papers, an oral examination and assessment of practical work.

PHARMACOLOGY 4FM

Fourth year; tutorials, seminars and practical work.
A full-time course of advanced theoretical and practical work including an introduction to research methods.
Candidates will be expected to present an account of an investigation of a simple problem.
Final examination: 2 papers, a dissertation and an oral examination.

*For the degree of Bachelor of Science in pharmacy*

PHARMACY 2FY

Second year; at times to be arranged.
Pharmacognosy: 1 or 2 lectures and 3 hours a week laboratory work.
Pharmaceutics: 1 lecture and 4 hours a week laboratory work.
Examination: 1 paper and a practical examination in pharmaceutics.

PHARMACY 3FY

Third year; at times to be arranged.
Pharmacognosy: 2 lectures and 4 hours a week laboratory work.
Pharmaceutics: 2 lectures and 6 hours a week laboratory work.
Pharmaceutical chemistry: 1 lecture and 4 hours a week laboratory work.

The course-work includes courses in histology in the department of anatomy and in bacteriology in the department of bacteriology.

Examination: One paper in forensic pharmacy, one paper in pharmaceutics and one paper in pharmacognosy; two practical examinations in pharmacognosy and an assessment of practical work in the other subjects.

PHARMACY 4FY

Fourth year; at times to be arranged.

Pharmaceutics: 9 hours a week lectures, tutorials and practical work.
Pharmaceutical chemistry: 9 hours a week lectures, tutorials and practical work.
Pharmacology: 9 hours a week lectures, tutorials and practical work.

Examination: 2 papers in pharmaceutics, 2 papers in pharmaceutical chemistry and 2 papers in pharmacology, and assessment of practical work in all subjects.

## HISTORY AND PHILOSOPHY OF SCIENCE

PHILOSOPHY 1D

First year; Monday, Tuesday and Friday, 4 to 5.

An introductory course in general philosophy and logic.

Examination: 2 papers.

HISTORY AND PHILOSOPHY OF SCIENCE 1E

First year; Monday, 3 to 4, 4 to 5; Friday, 4 to 5; and a fortnightly tutorial.
The development of European science and the philosophy of science.

Examination: 2 papers.

HISTORY OF SCIENCE 2E

Second year: 4 hours a week at times to be arranged.

Topics in scientific thought, and set-book.

Examination: 2 papers.

HISTORY OF SCIENCE 3E

Third year; 4 hours a week at times to be arranged.

Examination: 2 papers.

*For the degree of Bachelor of Science in two main subjects combined (history of science, and/or philosophy, with another subject)*

HISTORY OF SCIENCE AND PHILOSOPHY 2A

Second year; 5 hours a week and tutorial at times to be arranged.

Introduction to philosophy, development of European science, and introductory logic.

This course does *not* require previous attendance at a first-year course in history of science, and/or philosophy.

Examination: 3 papers.

PHILOSOPHY 3A

Third year; 6 hours a week at times to be arranged.
History of philosophy (ancient *or* modern), philosophy of science, ethics *or* political philosophy, and contemporary philosophy seminar.
The course requires previous attendance at History of science and philosophy 2A.
Examination: 3 papers.

HISTORY OF SCIENCE 3B

Third year; 6 hours a week at times to be arranged.
History of philosophy (ancient *or* modern), philosophy of science, topics in scientific thought and a set-book.
The course requires previous attendance at History of science and philosophy 2A.
Examination: 4 papers.

HISTORY OF SCIENCE 3C

Third year; 4 hours a week at times to be arranged.
Topics in scientific thought, a set-book and a special subject.
This course may be taken only in conjunction with Philosophy 3A.
Examination: 2 papers.

PHILOSOPHY 4A

Fourth year; at times to be arranged.
Seminar in philosophy of science, contemporary philosophy seminar, philosophy special subject, and a set-book (history of science).
Examination: 5 papers on logic and metaphysics, history of philosophy (ancient *or* modern), ethics *or* political philosophy, history and philosophy of science, and the special subject.

HISTORY OF SCIENCE 4B

Fourth year; at times to be arranged.
Seminar in philosophy of science, topics in scientific thought, and a special subject.
Examination: 5 papers on the set-book and special subject, topics in scientific thought, philosophy of science, history of philosophy (ancient *or* modern), and essay.

HISTORY OF SCIENCE AND PHILOSOPHY 4C

Fourth year; at times to be arranged.
Seminar in philosophy of science, contemporary philosophy seminar, and *either* topics in scientific thought *or* special subject (philosophy) and special subject (history of science).
The course must follow Philosophy 3A *and* History of science 3C.
Examination: 6 papers on logic and metaphysics, history of philosophy (ancient *or* modern), ethics *or* political philosophy, set-book and special subject (history of science), and *either* special subject (philosophy), and history and philosophy of science, *or* topics in scientific thought, and essay (history of science).

*For the degree of Bachelor of Science in chemistry*

HISTORY OF SCIENCE 2CH

First or second year; Monday, 3 to 4, 4 to 5, and Friday, 4 to 5; Monday, 12 to 1, and tutorial at times to be arranged.

The course includes: the development of European science, the philosophy of science, and the history of chemistry.
Examination: 3 papers.

## GERMAN

GERMAN FOR SCIENCE STUDENTS 1Z

Any year; Monday and Friday, 2 to 3.
Outline of German grammar, prescribed texts. The course is intended for beginners. Special attention will be given to the needs of students of science and technology.
Book recommended: Neville and Yuill, *Translation from German for Chemists* (Blackie).

## RUSSIAN

*For the degree of Bachelor of Science*

RUSSIAN FOR SCIENCE STUDENTS 1A

First year; Monday, 10 to 11, Tuesday, 4 to 5, and Thursday, 4 to 5.
Outline of Russian grammar, syntax and word-building, transliteration of foreign scientific terms; oral and written translation from Russian of prepared and unprepared texts. Students are expected, at the end of the course, to know sufficient grammar and vocabulary to translate from Russian without a dictionary passages based on texts studied during the course, and more difficult passages with the aid of a dictionary.
Examination: 1. Translation from Russian based on texts studied during the course (2 hours); 2. Translation from Russian, use of dictionary permitted (2 hours).

RUSSIAN FOR SCIENCE STUDENTS 2A

Second year; 4 hours a week at times to be arranged, including 1 hour to be devoted to practical exercises in Russian pronunciation.
Examination: 3 papers: Russian composition, translation from Russian, prescribed texts; and an oral examination.

## ITALIAN

*For the degree of Bachelor of Science*

ITALIAN 1A

First year; 3 hours of lectures a week and a further hour of practical work. The study of grammar, of composition, of prescribed texts, and of the civilization of Italy. The texts prescribed are the same as those for the one-year course for the degree of Bachelor of Arts in general studies.

The course is available either as a one-year course, or as the first year of a two-year course, in Italian as a subsidiary subject for the degree of Bachelor of Science in either one- or two-main subject schemes. No previous knowledge of Italian is required.
Examination: 2 papers and an oral examination.

ITALIAN 2A
Second year; 4 hours a week at times to be arranged.
The content of this course and the books prescribed will be the same as for one of the years of the two-year course for the degree of Bachelor of Arts in general studies.
One special subject shall be chosen. Books will be prescribed for each special subject.
The course normally requires previous attendance at Italian 1A.
Examination: 2 papers and an oral examination.

## ECONOMICS

*For the degree of Bachelor of Science in two main subjects combined*

ECONOMICS 2A
Second year.
General economics: Tuesday and Thursday, 10 to 11; and a tutorial fortnightly at times to be arranged.
English economic history: Tuesday, 3 to 4; Thursday, 4 to 5; and a tutorial fortnightly at times to be arranged.
The course includes the elements of social accounting, monetary systems, theory of production, demand, supply and price formation, distribution, industrial organisation, the level of activity and public policy together with an outline of English economic history from 1066 to 1914.

# THE FACULTY OF TECHNOLOGY

## ORDINANCE V

[continued from page 478]

### DEGREES IN APPLIED SCIENCE

27. The degrees in applied science shall be:

Bachelor of Science (B.Sc.)
Master of Science (M.Sc.)
Doctor of Philosophy (Ph.D.)
Doctor of Science (D.Sc.)

### THE DEGREE OF BACHELOR OF SCIENCE

[See also the regulations on page 554.]

28. The degree of Bachelor of Science shall be conferred either as an ordinary degree or as a special Honours degree.

29. All candidates for the degree of Bachelor of Science shall be required to have passed the examination for matriculation or to have obtained a certificate of exemption therefrom, and thereafter to have pursued courses of study for not less than three academic years.

### THE ORDINARY DEGREE OF BACHELOR OF SCIENCE

30. Every candidate shall be required to attend courses of study as set forth in the regulations for his particular school of applied science.

31. The courses of study in each school of applied science shall extend over at least three years.

### THE DEGREE OF BACHELOR OF SCIENCE WITH HONOURS

32. Candidates shall be required to attend the prescribed courses of study as defined under the regulations for the various special Honours schools of applied science and to pass the prescribed examinations.

33. Names of candidates who have passed the examination for the degree of Bachelor of Science with Honours will be published in such form as to distinguish the Honours school in which severally they may have passed. The successful candidates may be awarded:

(i) the degree of Bachelor of Science with first-class Honours,
or (ii) the degree of Bachelor of Science with second-class Honours, first division,
or (iii) the degree of Bachelor of Science with second-class Honours, second division,
or (iv) the degree of Bachelor of Science with third-class Honours,
or (v) the degree of Bachelor of Science.

34. Candidates who have not acquitted themselves so as to deserve Honours but who have reached the standard of the ordinary degree, may be recommended for that degree. They will not be allowed to present themselves a second time for the same Honours examination.

35. Every candidate for the degree of Bachelor of Science with Honours shall ordinarily be required to present himself for examination at the end of the third or fourth or fifth academic year from the time when he has entered upon one of the courses of instruction approved by the University for such degree, unless he shall present a medical certificate of illness satisfactory to the Senate. The examination shall ordinarily be held in June of each year.

36. Candidates who have passed the examination for the ordinary degree of Bachelor of Science may during the following session proceed with the course of study in a special Honours school and may present themselves for examination for the Honours degree in the fourth or fifth session of their University course.

37. Candidates who have passed the Honours examination in any of the special Honours schools may during the following session proceed with the course of study in another special Honours school, and may thereafter present themselves for examination in this second Honours school in the fourth or fifth session of their University course.

38. Candidates may choose one of the special Honours schools in applied science specified in the regulations for the special Honours degree in applied science, and must follow the course of study as prescribed in the regulations for each special Honours school in applied science.

39. Candidates who shall present evidence satisfactory to the Senate that they are qualified to enter upon a course of research may receive permission to pursue such a course, and to offer a thesis of their work in place of part or the whole of the Honours examination; but no candidate shall be excused the whole of the Honours examination unless he shall have satisfied the examiners in the subject of his Honours school of applied science up to the standard of the ordinary degree in that school.

## THE DEGREE OF MASTER OF SCIENCE

[The degree of Master of Science in applied science subjects is governed by ordinance V, articles 12 to 20 and relevant regulations which will be found on pages 475 and 481. Particulars of a scheme of co-operation for postgraduate study in textile technology will be found on page 557.]

## THE DEGREE OF DOCTOR OF PHILOSOPHY

[The degree of Doctor of Philosophy is governed by ordinance II, articles 50 to 52 and relevant regulations which will be found on pages 299 and 310. Particulars of a scheme of co-operation for postgraduate study in textile technology will be found on page 557.]

## THE DEGREE OF DOCTOR OF SCIENCE

[The degree of Doctor of Science in applied science subjects is governed by ordinance V, articles 21 to 23 and the relevant regulation which will be found on pages 478 and 482.]

# REGULATIONS FOR DEGREES

[continued from page 483]

## THE DEGREE OF BACHELOR OF SCIENCE

24. The record of students at their departmental examinations may be taken into account in deciding the results of degree examinations.

25. Candidates may, with the consent of the dean of the Faculty in the case of ordinary degrees or of the head of the department in the case of special Honours degrees, present subjects more in number and higher in grade than those required by the Ordinance for those proceeding to a degree. Additional subjects need not be confined to those prescribed in the regulations for the degree of Bachelor of Science.

26. Candidates presenting a subject at a higher grade and failing to pass therein may, at the option of the examiners, be recommended for a pass in a lower grade.

27. Candidates who satisfy the examination requirements of the ordinary degree in two sessions must satisfactorily pursue a course in the third session approved by the Board of the Faculties of Science and Technology.

28. Students taking a science degree may be exempted by the Board of the Faculties of Science and Technology from the first-year courses and corresponding examinations in the subjects already passed at the advanced level in the General Certificate of Education examination or in an equivalent examination, provided that they have passed at a sufficiently high standard and pursue an approved alternative course of study.

Applications for such exemptions should be made by the student to the head of the department in which he is presenting himself for Honours in the case of a special Honours candidate or to the dean of the Faculty of Technology in the case of any other candidate.

29. Each application for the recognition of research work must be made to the Senate not later than the last day of the October preceding the Honours examination, together with a statement of the intended subject of research, and a summary of the course of work actually pursued must be presented not later than the first day of the May preceding the Honours examination.

30. Candidates whose theses do not satisfy the examiners shall not receive the Honours degree, but may be recommended for the ordinary degree.

31. Candidates may choose an applied science school (ordinary or Honours) from the following list:

Civil engineering
Mechanical engineering
Electrical engineering
Mining
Fuel science
Fuel engineering

Chemical engineering
Ceramics
Metallurgy
Applied mineral sciences
Textile physics
Textile chemistry
Textile engineering
Textile industries
Colour chemistry
Dyeing
Leather science
Food science
Agriculture
Agricultural botany [Honours school only]
Agricultural chemistry [Honours school only]
Agricultural economics [Honours school only]

32. In the final examination a paper will be set containing passages of French and German translation into English relating to the principal subject or subjects of a candidate's degree course. All candidates may take this paper, and marks will be awarded for correct renderings of such passages. Candidates will be allowed the use of dictionaries at this language test examination.

33. Examiners will take account of the command of English language shown by candidates.

## EXAMINATIONS

[Examinations for degrees in applied science are governed by the regulations which govern the examinations for degrees in pure science. The regulations will be found on page 483.

Attention is also drawn to the general regulations for all examinations on pages 248 and fol.]

## REGULATIONS FOR DIPLOMAS

34. Candidates for diplomas are required to give satisfactory attendance upon all subjects which form part of their course of study, and to present themselves for any departmental examinations that may be held in the same. The record of students at their departmental examinations will be taken into account in deciding the results of diploma examinations.

35. At the close of the course, candidates will be required to present themselves for such examination in the main subject of study as may be prescribed.

36. Some deviation from these courses may be sanctioned in special cases and students who on entering upon a diploma course produce evidence that they possess a sufficient knowledge of the work done during a part of the course will be allowed to dispense with a certain amount of attendance. Applications for exemption from attendance should be made to the head of the department concerned, who shall bring them before the standing committee of the Senate appointed to deal with such matters.

37. Diplomas are granted by the University in the following subjects:

Agriculture*
Leather manufacture
Textile industries

In addition the University grants postgraduate diplomas in the following subjects:

Agricultural bacteriology
Agricultural botany*
Agricultural chemistry
Agricultural economics
Agricultural zoology
Agriculture (farm management)
Applied geophysics
Ceramics
Chemical engineering
Concrete technology
Fuel science
Fuel engineering
Food science
Leather science
Metallurgy
Mineral dressing and coal preparation
Plant pathology*
Textile industries.

[Further detailed regulations governing the award of these diplomas and prescribing approved schemes of study will be found on pages 596 and fol.]

* In abeyance.

## SCHEME OF CO-OPERATION FOR POSTGRADUATE STUDY BETWEEN THE UNIVERSITY OF LEEDS AND THE WOOL INDUSTRIES RESEARCH ASSOCIATION

Duly qualified graduates in science or technology may fulfil the requirements of the Ordinances and regulations governing the degrees of Master of Science (see pages 475 and 481) and Doctor of Philosophy (see pages 299 and 310) of the University and may proceed to either degree after carrying out research at the Wool Industries Research Association, Torridon, Leeds 6, under the Director of that Association.

Graduates of universities other than Leeds, and Leeds graduates without satisfactory previous training in textile industries who wish to avail themselves of these facilities must attend approved courses in the department of textile industries for at least one year, normally *before* they begin work at Torridon. In exceptional circumstances and with the approval of the Senate the fulfilment of this requirement may be concurrent with the period at Torridon.

Students reading for higher degrees under the scheme will be, throughout, under the immediate and direct control of the Director of the Wool Industries Research Association who must be approved by the University for this purpose, but periodical discussion of the work will take place between the Director and the head of the department of textile industries. For the purposes of the scheme, the Director has been appointed an honorary member of the staff of the department of textile industries, with the title of Director of Research Students at Torridon.

All students proceeding to degrees through research carried out at Torridon must be duly registered students of the University and, as such, will be subject to its discipline. They will be required to pay such fees for tuition as the University Council may determine and on payment of the appropriate additional fees they shall be entitled to all student facilities, for example, University Union membership, library, residence, health service, appointments board.

# PRESCRIBED SCHEMES OF STUDY FOR THE DEGREE OF BACHELOR OF SCIENCE

Candidates should note that in order to qualify for admission to a scheme of study for a first degree in the University, they must satisfy both a *General Requirement* and a *Course Requirement*. For information regarding the *General Requirement*, for purposes of matriculation, candidates should write to The Secretary, Joint Matriculation Board, Manchester 15. The *Course Requirement* is set out at the beginning of the regulations for each degree scheme in the Faculty of Technology.

**CIVIL ENGINEERING :** There are three schemes of study in civil engineering: two schemes, one extending over four years, the second over three years, lead to the degree of Bachelor of Science with Honours in Civil Engineering; the third extends over three years and leads to the Ordinary degree of Bachelor of Science in Civil Engineering.

## *Course Requirement*

For admission to all three schemes of study passes in two approved subjects at advanced level are required.

*One* of these passes must be in mathematics (which, if examined as one subject, must include both pure and applied mathematics).

The *second* must be in either chemistry or physics.

Selection for entry into the three-year Honours scheme will be made on the basis of achievement in the advanced level examination. Candidates should note that passes in the Higher National Certificate will be regarded as equivalent to passes at advanced level for the purposes of admission to schemes of study in civil engineering.

## *Four-year scheme leading to the degree with Honours in civil engineering*

First year
- Engineering I
- Mathematics 1A
- Metallurgy for engineers
- Applied economics B *or* Industrial management I
- and *one* of the following:
  - Physics 1A
  - Chemistry 1A
  - An approved alternative subject

Second year
- Engineering II
- Mathematics 2T
- *Geology 1CV

*Field work in addition.

Third and fourth years

*SCHEME A*
Engineering IIIA
*One* of:
- Engineering IV
- The State and industrial relations *and* Trade unionism and collective bargaining*
- Industrial management III†
- Mathematics 4T

and *one* of:
- Mathematics 3T
- Statistics 2Z
- Metallurgy 3E
- Industrial relations or Industrial management II
- An approved alternative subject

*SCHEME B*
Engineering IIIB and one of the following:
- Mathematics 3T
- Statistics 2Z
- Metallurgy 3E
- Industrial relations *or* Industrial management II†
- An approved alternative subject

*Three-year scheme leading to the degree with Honours in civil engineering*

First year
- Engineering I
- Mathematics 2T
- Metallurgy for engineers
- Applied economics B *or* Industrial management I

Second year
- Engineering II
- Geology 1CV‡
- and *one* of the following:
  - Mathematics 3T
  - Statistics 2Z
  - Metallurgy 3E
  - Industrial relations *or* Industrial management II†
  - An approved alternative subject

Third year

*SCHEME A*
Engineering IIIA
*One* of:
- Engineering IV
- The State and industrial relations *and* Trade unionism and collective bargaining*
- Industrial management III†
- Mathematics 4T

*Candidates for these courses must have taken Industrial relations.

†Candidates wishing to proceed to Industrial management III *must* take Industrial management II.

‡Field work in addition.

*SCHEME B*
Engineering IIIB

*Three-year scheme leading to the Ordinary degree in civil engineering*

First year — Engineering I
Mathematics 1A
Metallurgy for engineers
Applied economics B *or* Industrial management I
and *one* of the following:
Physics 1A
Chemistry 1A
An approved alternative subject

Second year — Engineering II
Mathematics 2T
*Geology 1CV

Third year — Engineering IIIA

**MECHANICAL ENGINEERING:** There are three schemes of study in mechanical engineering: two schemes, one extending over four years, the second over three years, lead to the degree of Bachelor of Science with Honours in Mechanical Engineering; the third extends over three years and leads to the Ordinary degree of Bachelor of Science in Mechanical Engineering.

*Course Requirement*

For admission to all three schemes of study passes in two approved subjects at advanced level are required; for the three-year Honours scheme a third pass is preferred.

*One* of these passes must be in physics.

The *second* must be in mathematics (which, if examined as one subject, must include both pure and applied mathematics).

The *third* should normally be in mathematics or in chemistry.

Candidates not having a pass in chemistry at advanced level must normally have a pass at ordinary level.

Selection for entry into the three-year Honours scheme will be made on the basis of achievement in the advanced level examination. Candidates should note that passes in the Higher National Certificate will be regarded as equivalent to passes at advanced level for the purpose of admission to schemes of study in mechanical engineering.

*Four-year scheme leading to the degree with Honours in mechanical engineering*

First year — Engineering I
Mathematics 1A
Metallurgy for engineers

*Field work in addition.

Applied economics A* *or* Industrial management I†
and
*either* Physics 1A
*or* An approved alternative subject

Second year — Engineering IIR (A option)
Mathematics 2T pure and applied
*or* Engineering IIR (B option)
Mathematics 2T pure and applied
Industrial management II‡ *or*
Industrial relations

Third year — Engineering IIIR
Mathematics 3T (course components C and D *or* D and E)
Fuel and non-metallic materials

Fourth year — *either* Engineering IIIA

Engineering IV, consisting of:
*either* 2 Engineering options with Mathematics 3T (course component F)
*or* 3 Engineering options
*or* Engineering IIIB
Engineering IV, consisting of:
*either* 2 Engineering options with Mathematics 3T (course component F)
*or* 3 Engineering options
Industrial management III *or* The State and industrial relations and Trade unionism and collective bargaining§

*Three-year scheme leading to the degree with Honours in mechanical engineering*

First year — Engineering I
Mathematics 2T pure and applied
Metallurgy for engineers
Applied economics A* *or* Industrial management I†

Second year — *either* Engineering IIA
Mathematics 3T (course components A, C and D *or* C and D)
Fuel and non-metallic materials
*or* Engineering IIB

*Candidates wishing to proceed to Industrial relations *must* take Applied economics A.

†Candidates wishing to proceed to Industrial management II *must* take Industrial management I.

‡Candidates wishing to proceed to Industrial management III *must* take Industrial management II.

§Candidates for these courses must have taken Industrial relations.

Mathematics 3T (course components D and E)
Fuel and non-metallic materials
*Industrial management II *or* Industrial relations

Third year — *Either* Engineering IIIA
Engineering IV, consisting of:
*either* 2 Engineering options with Mathematics 3T (course component F)
*or* 3 Engineering options
*or* Engineering IIIB
Engineering IV, consisting of:
*either* 2 Engineering options with Mathematics 3T (course component F)
*or* 3 Engineering options
Industrial management III *or* The State and industrial relations *and* Trade unionism and collective bargaining†

### *Three-year scheme leading to the Ordinary degree in mechanical engineering*

First and second years — As in the four-year scheme leading to the degree with Honours

Third year — Engineering IIIR
Fuel and non-metallic materials

**ELECTRICAL ENGINEERING:** There are four schemes of study in electrical engineering: two schemes, one extending over four years, the second over three years, lead to the degree of Bachelor of Science with Honours in Electrical Engineering; the other two, extending over four and three years respectively, lead to the Ordinary degree of Bachelor of Science in Electrical Engineering.

### *Course Requirement*

For admission to all four schemes of study passes in two approved subjects at advanced level are required.

*One* of these passes must be in mathematics (which, if examined in one subject must include pure and applied mathematics).

The *second* must be in physics.

Selection for entry into the three-year Honours scheme will be made on the basis of achievement in the advanced level examination. Candidates should note that passes in the Higher National Certificate may be regarded as equivalent to passes at advanced level for the purpose of admission to schemes of study in electrical engineering provided that the physics content of the Higher National Certificate course has been of approximately advanced level standard.

*Candidates wishing to proceed to Industrial management III *must* take Industrial management II.

†Candidates for these courses *must* have taken Industrial relations.

*Four-year scheme leading to the degree with Honours in electrical engineering*

| | |
|---|---|
| First year | Engineering ISE |
| | Engineering IS |
| | Mathematics 1A |
| | Physics 1A *or* an approved alternative subject |
| Second year | Engineering IE |
| | Mathematics 2T pure and applied |
| | Physics 2EE |
| | Applied economics B *or* Industrial management I |
| Third and fourth years | Identical, respectively, with the second and third years of the three-year scheme. |

*Three-year scheme leading to the degree with Honours in electrical engineering*

| | |
|---|---|
| First year | Engineering IE |
| | Engineering IS |
| | Mathematics 2T pure and applied |
| | Physics 2EE |
| | Applied economics B *or* Industrial management I |
| Second year | Engineering II |
| | Mathematics 3T pure and applied |
| Third year | Engineering III |
| | Engineering IV |

*Four-year scheme leading to the Ordinary degree in electrical engineering*

| | |
|---|---|
| First and second years | As in the four-year scheme leading to the degree with Honours* |
| Third year | Engineering II |
| Fourth year | Engineering III |

*Three-year scheme leading to the Ordinary degree in electrical engineering*

| | |
|---|---|
| First year | As in the three-year scheme leading to the degree with Honours* |
| Second year | Engineering II |
| Third year | Engineering III |

**MINING†:** There are two schemes of study in mining, one leading to a degree with Honours, the second to an Ordinary degree; the first scheme leading to the degree of Bachelor of Science with Honours in Mining may extend over four years, but suitably qualified candidates may be exempted from the first year and be able to complete the course in three years; the second extends over three years and leads to the Ordinary degree of Bachelor of Science in Mining.

*With the exception that candidates may be eligible for the award of the ordinary degree without having satisfied the examiners in Physics 2EE.

†Given by the department of applied mineral science.

## *Course Requirement*

For admission to the four-year Honours and the Ordinary degree schemes of study passes in two approved subjects at advanced level are required.

*One* of these passes must be in physics.

The *second* must be in mathematics pure and applied (taken as one or two subjects).

For exemption from the first year of the four-year Honours scheme passes at a satisfactory standard in three approved subjects are required.

*One* of these passes must be in physics.

The *second* must be in mathematics pure and applied (taken as one or two subjects).

The *third* must be in chemistry.

### *Four-year scheme leading to the degree with Honours in mining*

| | |
|---|---|
| First year | Mathematics 1A<br>*either* Physics 1A<br>*or* Chemistry 1A or 1B<br>Geology 1MI<br>Mineral technology 1 |
| Second year | Engineering IS<br>Mathematics 2T<br>Surveying<br>Industrial management I<br>Geology 2MI |
| Third year | Mineral technology 2<br>Engineering IIS<br>Industrial management II<br>Mining technology 1 |
| Fourth year | Mining technology 2<br>Mining technology 3<br>Mineral economics |

Students with appropriate qualifications on entry may be excused the first year and proceed to the degree with Honours on a re-arranged syllabus.

### *Three-year scheme leading to the Ordinary degree in mining*

| | |
|---|---|
| First year | Mathematics 1A<br>*either* Physics 1A<br>*or* Chemistry 1A<br>Geology 1MI<br>Mineral technology 1 |

| | |
|---|---|
| Second year | Engineering IS |
| | Mathematics 2T |
| | Surveying |
| | Industrial management I |
| | Geology 2MI |
| Third year | Mining technology 1 |
| | Mining technology 2 |
| | Mineral technology 2 |
| | Industrial management II |

**FUEL SCIENCE:** There are two schemes of study in fuel science, one leading to a degree with Honours, the second to an Ordinary degree: the first scheme leading to the degree of Bachelor of Science with Honours in Fuel Science may extend over four years, but suitably qualified candidates may be exempted from the first year and be able to complete the course in three years; the second extends over three years and leads to the Ordinary degree of Bachelor of Science in General Fuel Science.

### *Course Requirement*

For admission to the four-year Honours scheme of study passes in three approved subjects at advanced level are required.

*One* of these passes must be in chemistry.

The *second* must be in mathematics pure and applied.

The *third* must be in physics.

For exemption from the first year of the four-year Honours scheme passes at a high standard in chemistry, mathematics pure and applied and physics at advanced level, are required.

For admission to the three-year Ordinary degree scheme passes in two approved subjects at advanced level are required. These passes may be in any two of the following: chemistry, mathematics pure and applied, physics.

### *Four-year scheme leading to the degree with Honours in fuel science*

| | |
|---|---|
| First year | Mathematics 1A |
| | Chemistry 1A or 1B |
| | Fuel T1 (General fuel science and technology) |
| | Fuel laboratory techniques |
| | Non-metallic materials of construction |
| Second year | Physics 2T |
| | Mathematics 2U (pure) |
| | Chemistry 2T |
| | Engineering IS and drawing |
| | Metallic materials of construction |
| Third year | Chemistry 3E |
| | Chemistry 3T |

General technology
Fuel H1
Progressive honours courses:
Fuel H2, H3 and H4

Fourth year
Fuel H2, H3 and H4 (continued)
Fuel H5
Fuel H6
Research exercise
Note—The progressive courses H1 to H4 will be examined only in the final year.

*Three-year scheme leading to the Ordinary degree in general fuel science*

First year
Mathematics 1A
Chemistry 1A or 1B
Fuel T1 (General fuel science and technology)
Fuel laboratory techniques
Non-metallic materials of construction

Second year
Physics 2T
Engineering IS and drawing
Fuel T2 (Petroleum technology)
Metallic materials of construction
Principles of industrial manipulation of materials (solids)

Third year
Fuel T3 (Combustion technology)
Fuel T4 (Fuel gas and coke)
Principles of technical processes
Heat transfer
Industrial instrumentation
Principles of industrial manipulation of materials (fluids, pastes) together with options selected from the following (2 hours lectures plus practical work where necessary)
General coal science } }
General petroleum science }
Engineering IIS M2 (heat engines) } }
Engineering IIS M4 (fluid mechanics) }
Economics and management
Geology
Materials for very high temperature processes
Corrosion

**FUEL ENGINEERING:** The scheme of study leading to the degree of Bachelor of Science with Honours in Fuel Engineering may extend over four years but suitably qualified candidates may be exempted from the first year and be able to complete the course in three years.

## *Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in three approved subjects at advanced level are required.

*One* of these passes must be in chemistry.

The *second* must be in mathematics pure and applied.

The *third* must be in physics.

*For exemption from the first year of the four-year scheme* passes at a high standard in chemistry, mathematics pure and applied, and physics, at advanced level, are required.

*Four-year scheme leading to the degree with Honours in fuel engineering*

| | |
|---|---|
| First year | Mathematics 1A<br>Chemistry 1A or 1B<br>Fuel T1 (General fuel science and technology)<br>Fuel laboratory techniques<br>Non-metallic materials of construction |
| Second year | Physics 2T<br>Mathematics 2U (pure)<br>Chemistry 2T<br>Engineering IS and drawing<br>Metallic materials of construction |
| Third year | Mathematics 2T (applied)<br>Statistics 2Z<br>Engineering IIS C1 (theory and design of structures)<br>Engineering IIS M2 (heat engines)<br>Progressive courses:<br>Fuel T2, T3 and T4<br>Engineering drawing<br>General technology<br>Industrial management |
| Fourth year | Progressive courses (continued):<br>Fuel H7, H8, H9<br>Fuel H6<br>Engineering IIS M1 (strength of materials)<br>Engineering IIS E1 (electric power engineering)<br>Engineering IIS E2 (electronic engineering)<br>Principles of industrial manipulation of materials (solids, fluids and pastes)<br>Industrial management<br>Note—The progressive courses T2—T4 and H7—H9 will be examined in the final year. |

**CHEMICAL ENGINEERING:** There are three schemes of study in chemical engineering: two schemes, one extending over four years, the second over

three years, lead to the degree of Bachelor of Science with Honours in Chemical Engineering; the third extends over three years and leads to the Ordinary degree of Bachelor of Science in Chemical Engineering.

## *Course Requirement*

For admission to all three schemes of study passes in three approved subjects at advanced level are required.

*One* of these passes must be in chemistry.
The *second* must be in physics.
The *third* must be in one of the mathematical subjects.

Selection for entry into the three-year Honours scheme will be made on the basis of achievement in the advanced level examinations, which must include both pure and applied mathematics (taken together or separately).

### *Four-year scheme leading to the degree with Honours in chemical engineering*

| | |
|---|---|
| First year (Exemptable) | Chemistry 1B (Introductory)<br>Physics 1A (Introductory)<br>Mathematics 1A (Introductory) |
| First year | Chemical process principles<br>Power thermodynamics<br>Strength of materials |
| First or Second year | Chemistry 2T (physical)<br>Mathematics 2T (omitting numerical analysis) |
| Second year | Engineering design<br>Fuel Introductory<br>Electrical engineering<br>Chemistry 3CE (organic) |
| Second or Third year | Heat transfer<br>Elementary unit operations<br>Fluid mechanics<br>Ceramics 1B |
| Third year | Process instrumentation 1<br>Chemistry 3T (physical)<br>Mathematics 3T (pure only) |
| Fourth year | Chemical engineering honours studies<br>Process instrumentation 2<br>Metallurgy CE<br>Mathematical computation |

### *Three-year scheme leading to the degree with Honours in chemical engineering*

| | |
|---|---|
| First year | Chemical process principles<br>Power thermodynamics |

| | |
|---|---|
| | Strength of materials |
| | Chemistry 2T (physical) |
| | Chemistry 3CE (organic) |
| | Mathematics 2T (omitting numerical analysis) |
| Second year | Heat transfer |
| | Elementary unit operations |
| | Fluid mechanics |
| | Engineering design |
| | Process instrumentation 1 |
| | Fuel Introductory |
| | Ceramics 1B |
| | Electrical engineering |
| | Chemistry 3T (physical) |
| | Mathematics 3T (pure only) |
| Third year | Chemical engineering honours studies |
| | Process instrumentation 2 |
| | Metallurgy CE |
| | Mathematical computation |

*Three-year scheme leading to the Ordinary degree in chemical engineering*

| | |
|---|---|
| First year | Chemistry 1B (Introductory) |
| (Exemptable) | Physics 1A (Introductory) |
| | Mathematics 1A (Introductory) |
| First year | Chemical process principles |
| | Power thermodynamics |
| | Strength of materials |
| First or | Chemistry 2T (physical) |
| Second year | Mathematics 2T |
| Second year | Fluid mechanics |
| | Fuel Introductory |
| | Ceramics 1B |
| | Electrical engineering |
| | Chemistry 3CE (organic) |
| Second or | Heat transfer |
| Third year* | Elementary unit operations |
| | Engineering design |
| | Metallurgy CE |
| Third year | Chemical engineering ordinary studies |
| | Process instrumentation 3 |
| | Statistics 2Z |

**CERAMICS:** The scheme of study leading to the degree of Bachelor of Science with Honours in Ceramics extends over four years; *exceptionally*, suitably qualified candidates may be exempted from the first year and be able to complete the course in three years.

*At least two of these courses must be examined or assessed in the third year.

## *Course Requirement*

*Four-year scheme:* for admission to the scheme of study passes in three approved subjects at advanced level are normally required.

*One* of these passes must be in chemistry.
The *second* must be in physics.
The *third* must be in one of the mathematical subjects.

*For exemption from the first year of the four-year scheme:* passes at a high standard in chemistry, mathematics pure and applied and physics, at advanced level, are required.

### *Four-year scheme leading to the degree with Honours in ceramics*

| | |
|---|---|
| First year | Mathematics 1A |
| | Physics 1A |
| | Chemistry 1B |
| | Engineering 1S |
| | Fuel Introductory |
| | Physics laboratory |
| | Chemistry laboratory |
| | Fuel laboratory |
| Second year | Mathematics 2U |
| | Physics 2T |
| | Chemistry 2A |
| | Ceramics 1 |
| | Geology 1CR (including laboratory) |
| | Physics laboratory |
| | Chemistry laboratory |
| | Ceramics laboratory |
| Third year | Chemistry 4B |
| | Metallurgy Introductory |
| | Process instrumentation 3 |
| | Ceramics 4, 5, 7 and 11 |
| | Heat transfer |
| | Chemistry laboratory |
| | Ceramics laboratory |
| Fourth year | Ceramics 10, 12, 13, 14, 15, 16, 17 |
| | Ceramics laboratory and research exercise |

**METALLURGY:** There are three schemes of study in metallurgy: two schemes, one extending over four years, the second over three years, lead to the degree of Bachelor of Science with Honours in Metallurgy; the third extends over three years and leads to the Ordinary degree of Bachelor of Science in Metallurgy.

## *Course Requirement*

For admission to the three- and four-year Honours schemes of study, passes in three approved subjects at advanced level are required. Candidates will be selected for the three-year Honours scheme on the basis of achievement in the advanced level examination.

*One* of the passes must be in chemistry.

The *second* must be in physics.

The *third* must be in one of the mathematical subjects, preferably in pure and applied mathematics.

For admission to the three-year Ordinary degree scheme passes in three approved subjects at advanced level (not necessarily in science subjects) are required.

It is possible for students to transfer from the Ordinary degree scheme to the four-year scheme leading to the Honours degree.

## *Four-year scheme leading to the degree with Honours in metallurgy*

First year
- Metallurgy G
  - General
- Mathematics 1A
- Physics 2T
- Chemistry 1B

Second year
- Metallurgy A
  - Extraction
  - Physical
- Mathematics 2T
- Chemistry 2T
- Engineering 1S

Third year
- Metallurgy PH
  - Commercial alloys
  - Corrosion
  - Crystallography
  - Iron and steel production
  - Metallurgical thermochemistry
  - Metallography
- Ceramics introductory
- Process instrumentation 3
- Topics in physics
- Fuel introductory

Fourth year
- Metallurgy FH
  - Alloy thermodynamics
  - Crystal physics
  - Electrons in solids
  - Forming

Founding
Industrial practice
Joining
Mechanical properties
Point imperfections
Polymers
Structure of alloys
Experimental methods
Electrical technology
Heat transfer

*Examination for the Honours Degree*

The examinations in Ceramics introductory, Electrical technology, Heat transfer, Process instrumentation 3 and Topics in physics will be taken as part of the final degree examination. Two of these examinations (Ceramics introductory and Topics in physics) will be taken in the penultimate year of the Honours degree course.

*Three-year scheme leading to the degree with Honours in metallurgy*

First year — Metallurgy AG
Extraction
General
Physical
Mathematics 2T
Physics 2T
Chemistry 2T

Second year — Metallurgy PH
Commercial alloys
Corrosion
Crystallography
Iron and steel production
Metallurgical thermochemistry
Metallography
Ceramics introductory
Topics in physics
Process instrumentation 3
Engineering IS
Fuel introductory

Third year — As fourth year of the four-year scheme for Honours.

*Examination for the Honours Degree*

See four-year scheme for Honours.

*Three-year scheme leading to the Ordinary degree in metallurgy*

First year — Metallurgy G
General

Mathematics 1A
Physics 1A
Chemistry 1B

Second year — Metallurgy A
Extraction
Physical
Engineering IS
and *two* of the following:
Mathematics 2T
Physics 2T
Chemistry 2T

Third year — Metallurgy Fo
Commercial alloys
Corrosion
Forming
Founding
Industrial practice
Iron and steel production
Joining
Mechanical properties
Structure of alloys
Metallography
Ceramics introductory
Electrical technology
Fuel introductory
Process instrumentation 3

*Examination for the Ordinary Degree*

The examinations in Ceramics introductory, Electrical technology, Process instrumentation 3, and Fuel introductory will be taken as part of the final degree examination.

**APPLIED MINERAL SCIENCES:** There are two schemes of study in applied mineral sciences, one leading to a degree with Honours, the second to an Ordinary degree: the first scheme leading to the degree of Bachelor of Science with Honours in Applied Mineral Sciences may extend over four years, but suitably qualified candidates may be exempted from the first year and be able to complete the course in three years; the second extends over three years and leads to the Ordinary degree of Bachelor of Science in Applied Mineral Sciences.

*Course Requirement*

For admission to the four-year Honours and the Ordinary degree schemes of study passes in two approved subjects at advanced level are required.

*One* of these passes must be in chemistry.

The *second* must be in mathematics pure and applied (taken as one or two subjects)

For exemption from the first year of the four-year Honours scheme passes at a satisfactory standard in three approved subjects are required.

*One* of these passes must be in chemistry.

The *second* must be in mathematics pure and applied (taken as one or two subjects).

The *third* must be in physics.

*Four-year scheme leading to the degree with Honours in applied mineral sciences*

| | |
|---|---|
| First year | Mathematics 1A |
| | Chemistry 1A or 1B |
| | Mineral technology 1 |
| | Geology 1AM |
| Second year | Mathematics 2T (pure only) |
| | Physics 2T |
| | Chemistry 2T |
| | Engineering IS |
| | Mineral technology 2(a) |
| Third year | Chemical engineering (fluid dynamics) |
| | Extraction metallurgy |
| | Mineral technology 3 |
| | Mineral sciences 1 |
| | Geology 2AM |
| | Fuel Introductory |
| | Materials of construction |
| Fourth year | Mineral sciences 2 |
| | Mineral economics |
| | Design of industrial plants |

*Three-year scheme leading to the Ordinary degree in applied mineral sciences*

| | |
|---|---|
| First year | Mathematics 1A |
| | *either* Chemistry 1A or 1B |
| | *or* Physics 1A |
| | Mineral technology 1 |
| | Geology 1AM |
| Second year | Physics 2T |
| | Engineering IS |
| | Mineral technology 2(a) |
| | Mathematics 2T (pure only) |
| | Fuel Introductory |

Third year
- Mineral technology 3
- Extraction metallurgy
- Materials of construction
- Geology 2AM
- Mineral sciences 1
- Mineral economics

**TEXTILE PHYSICS:** There are two schemes of study leading to the degree of Bachelor of Science with Honours in Textile Physics, one extending over three years, the other extending over four years.

*Course Requirement*

For admission to either scheme of study passes in two approved subjects at advanced level are required.

*One* of these passes must be in physics.

The *second* must be in mathematics, pure and applied.

Selection for entry into the three-year scheme of study will be made on the basis of achievement in the advanced level examination.

*Three-year scheme leading to the degree of Bachelor of Science with Honours in textile physics*

First year
- Mathematics 2T
- Physics 2A
- Textiles I
- Fibre science I—selected courses including:
  - Textile chemistry 2C(i) and 2C(ii)
  - Textile physics 2P(ii)
- Textile physics tutorial

Second year
- Physics 3A
- Fibre science II comprising:
  - Textile chemistry 3C(i), 3C(ii) and 3C(iii)
  - Textile physics 3P
- Textile engineering 2E
- Textile technology comprising:
  - Raw materials 2T
  - Woollen yarn manufacture 2T

*or* Staple fibre yarn manufacture 2T

- Worsted yarn manufacture 2T

*or* Staple fibre yarn manufacturer 2T

- Weaving mechanisms 1T
- Cloth analysis 1T
- Cloth structure 1T
- Colour study 1T
- Knitting 1T
- Physical testing (statistics) 1
- Cloth finishing 2T

Third year

Textile physics (tutorials and advanced lectures)
Textile engineering 3E(i) and 3E(ii)
Textile technology comprising:
Woollen yarn manufacture 3T
*or* Staple fibre yarn manufacture 3T
Worsted yarn manufacture 3T
*or* Staple fibre yarn manufacture 3T
Weaving mechanisms 2T
Cloth analysis 2T
Cloth structure 2T
Cloth finishing 1T
Dyeing 1T
Mill management
Complex textiles
*or* Knitting 2T
Physical testing (methods)
Statistics applied to the textile industry

*Four-year scheme leading to the degree of Bachelor of Science with Honours in textile physics*

First year

Mathematics 1A
Physics 1A
Chemistry 1A
Textiles I
Textile physics tutorial

Second year

Mathematics 2T
Physics 2A
Fibre science I—selected courses including:
Textile chemistry 2C(i), 2C(ii) and 2C(iii)
Textile physics 2P(ii) and 2P(iii)
Textile technology comprising:
Raw materials 2T
Weaving mechanisms 1T
Cloth structure 1T
Cloth analysis 1T
Colour study 1T

Third year

Physics 3A
Fibre science II comprising:
Textile chemistry 3C(i), 3C(ii), and 3C(iii)
Textile physics 3P
Textile engineering 2E
Textile technology comprising:
Woollen yarn manufacture 2T
*or* Staple fibre yarn manufacture 2T
Worsted yarn manufacture 2T
*or* Staple fibre yarn manufacture 2T

Weaving mechanisms 2T
Cloth structure 2T
Cloth analysis 2T
Knitting 1T
Cloth finishing 1T and 2T
Physical testing (statistics) 1

Fourth year
Textile physics (tutorials and advanced lectures)
Textile engineering 3E(i) and 3E(ii)
Textile technology comprising:
Woollen yarn manufacture 3T
*or* Staple fibre yarn manufacture 3T
Worsted yarn manufacture 3T
*or* Staple fibre yarn manufacture 3T
Physical testing (methods)
Dyeing 1T
Statistics applied to the textile industry
Complex textiles
*or* Knitting 2T
Mill management.

**TEXTILE CHEMISTRY:** There are two schemes of study leading to the degree of Bachelor of Science with Honours in Textile Chemistry, one extending over three years, the other extending over four years.

*Course Requirement*

For admission to either scheme of study passes in two approved subjects at advanced level are required.

*One* of these passes must be in chemistry.

The *second* should normally be in mathematics, pure and applied.

Selection for entry into the three-year scheme of study will be made on the basis of achievement in the advanced level examination.

*Three-year scheme leading to the degree of Bachelor of Science with Honours in textile chemistry*

First year
Chemistry 2A
Chemistry 3E
Textiles I
Colour study 1T
Raw materials 2T

Second year
Chemistry 4B
Fibre science I—selected lectures including:
Textile chemistry 2C(ii)
Textile physics 2P(ii) and 2P(iii)
Textile engineering 2E
Textile technology comprising:

Woollen yarn manufacture 2T
*or* Staple fibre yarn manufacture 2T
Worsted yarn manufacture 2T
*or* Staple fibre yarn manufacture 2T
Weaving mechanisms 1T
Cloth structure 1T
Cloth analysis 1T
Knitting 1T
Physical testing (statistics) 1

**Third year** Fibre science II comprising:
Textile chemistry 3C(i), 3C(ii) and 3C(iii)
Textile physics 3P
Advanced courses in Textile chemistry
Textile engineering 3E(i) and 3E(ii)
Textile technology comprising:
Woollen yarn manufacture 3T
*or* Staple fibre yarn manufacture 3T
Worsted yarn manufacture 3T
*or* Staple fibre yarn manufacture 3T
Weaving mechanisms 2T
Cloth structure 2T
Cloth analysis 2T
Complex textiles
*or* Knitting 2T
Cloth finishing 1T and 2T
Dyeing 1T
Mill management
Physical testing (methods).

*Four-year scheme leading to the degree of Bachelor of Science with Honours in textile chemistry*

**First year** Mathematics 1A *or* Mathematics 1Z
Physics 1A
Chemistry 1A
Textiles I

**Second year** Chemistry 2A
Chemistry 3E
Fibre science I—selected courses including:
Textile chemistry 2C(ii)
Textile physics 2P(ii) and 2P(iii)
Textile engineering 2E
Textile technology comprising:
Raw materials 2T
Weaving mechanisms 1T
Cloth structure 1T
Cloth analysis 1T

Colour study 1T
Knitting 1T

Third year — Chemistry 4B
Fibre science II—selected courses including:
Textile chemistry 3C(i), 3C(ii) and 3C(iii)
Textile technology comprising:
Woollen yarn manufacture 2T
*or* Staple fibre yarn manufacture 2T
Worsted yarn manufacture 2T
*or* Staple fibre yarn manufacture 2T
Cloth finishing 1T and 2T
Physical testing (methods)
Physical testing (statistics) 1

Fourth year — Advanced courses in Textile chemistry
Fibre science II—selected courses including:
Textile physics 3P
Textile engineering 3E(i) and 3E(ii)
Textile technology comprising:
Woollen yarn manufacture 3T
*or* Staple fibre yarn manufacture 3T
Worsted yarn manufacture 3T
*or* Staple fibre yarn manufacture 3T
Weaving mechanisms 2T
Cloth structure 2T
Cloth analysis 2T
Complex textiles
*or* Knitting 2T
Dyeing 1T
Mill management

**TEXTILE ENGINEERING:** There are two schemes of study leading to the degree of Bachelor of Science with Honours in Textile Engineering, one extending over three years, the other extending over four years.

## *Course Requirement*

For admission to either scheme of study passes in two approved subjects at advanced level are required.

*One* of these passes must be in mathematics, pure and applied.

The *second* should normally be in physics.

Selection for entry into the three-year scheme of study will be made on the basis of achievement in the advanced level examination.

### *Three-year scheme leading to the degree of Bachelor of Science with Honours in textile engineering*

First year — Mathematics 2T
Engineering IS

Textiles I
Textile physics 2P(ii)
Textile technology comprising:
Woollen yarn manufacture 2T
*or* Staple fibre yarn manufacture 2T
Worsted yarn manufacture 2T
*or* Staple fibre yarn manufacture 2T
Cloth structure 1T
Cloth analysis 1T

Second year
Engineering IIS and IIM (selected courses)
Textile engineering 2E
Textile engineering 3E(i) and 3E(ii)
Textile chemistry 2C(ii)
Textile technology comprising:
Raw materials 2T
Weaving mechanisms 1T
Knitting 1T
Physical testing (methods)
Physical testing (statistics) 1

Third year
Engineering IIIM3
Advanced courses in textile engineering
Fibre science II comprising:
Textile chemistry 3C(i), 3C(ii) and 3C(iii)
Textile physics 3P
Textile technology comprising:
Woollen yarn manufacture 3T
*or* Staple fibre yarn manufacture 3T
Worsted yarn manufacture 3T
*or* Staple fibre yarn manufacture 3T
Weaving mechanisms 2T
Cloth structure 2T
Cloth analysis 2T
Complex textiles
*or* Knitting 2T
Cloth finishing 1T and 2T
Dyeing 1TD
Mill management

*Four-year scheme leading to the degree of Bachelor of Science with Honours in textile engineering*

First year
Mathematics 1A
Physics 1A
Chemistry 1A
Engineering IS
Textiles I

Second year
Mathematics 2T
Engineering IIS and IIM (selected courses)
Textile engineering 2E
Textile physics 2P(ii)
Textile technology comprising:
Raw materials 2T
Weaving mechanisms 1T
Cloth structure 1T
Knitting 1T
Physical testing (statistics) 1

Third year
Textile engineering 3E(i) and 3E(ii)
Textile chemistry 2C(ii) and 3C(iii)
Textile physics 3P
*or* Statistics with textile testing
Textile technology comprising:
Woollen yarn manufacture 2T
*or* Staple fibre yarn manufacture 2T
Worsted yarn manufacture 2T
*or* Staple fibre yarn manufacture 2T
Cloth analysis 1T
Cloth structure 2T
Cloth finishing 1T and 2T
Dyeing 1T
Physical testing (methods)

Fourth year
Engineering IIIM3
Advanced courses in textile engineering
Textile chemistry 3C(i) and 3C(ii)
Textile technology comprising:
Woollen yarn manufacture 3T
*or* Staple fibre yarn manufacture 3T
Worsted yarn manufacture 3T
*or* Staple fibre yarn manufacture 3T
Weaving mechanisms 2T
Cloth analysis 2T
Complex textiles
*or* Knitting 2T
Mill management

**TEXTILE INDUSTRIES:** The scheme of study leading to the Ordinary degree of Bachelor of Science in Textile Industries extends over three years; suitably qualified candidates may obtain the degree of Bachelor of Science with Honours in Textile Industries by presenting a thesis embodying the results of original research and additionally they may be required to attend ancillary lectures and pass an appropriate examination; the scheme of study may then extend over four years.

*Course Requirement*

For admission to the scheme of study passes in two approved subjects at advanced level are required. These passes may be in any approved science subject.

*Three-year scheme leading to the Ordinary degree of Bachelor of Science in textile industries*

*SCHEME A*

First year
- *Three* of the following:
  - Mathematics 1A
  - *or* Mathematics 1Z
  - Physics 1A
  - Chemistry 1A
  - Engineering 1S
  - *and* Textiles I comprising:
    - Textile chemistry 1C
    - Textile physics 1P
    - Textile engineering 1E
    - Textile technology (Raw materials 1T, Yarn manufacture 1T and Fabric manufacture 1T)

Second year
- Statistics with textile testing comprising:
  - Statistics
  - Physical testing (methods)
  - Statistics applied to the textile industry
- Fibre science I comprising:
  - Textile chemistry 2C(i), 2C(ii) and 2C(iii)
  - Textile physics 2P(i), 2P(ii) and 2P(iii)
- Textile engineering 2E
- Textile technology comprising:
  - Raw materials 2T
  - Woollen yarn manufacture 2T
  - *or* Staple fibre yarn manufacture 2T
  - Worsted yarn manufacture 2T
  - *or* Staple fibre yarn manufacture 2T
  - Weaving mechanisms 1T
  - Cloth structure 1T
  - Cloth analysis 1T
  - Knitting 1T
  - Colour study 1T
  - Cloth finishing 2T

Third year
- Industrial management I
- Fibre science II comprising:
  - Textile chemistry 3C(i), 3C(ii) and 3C(iii)
  - Textile physics 3P
- Textile engineering 3E(i) and 3E(ii)

Textile technology comprising:
Woollen yarn manufacture 3T
*or* Staple fibre yarn manufacture 3T
Worsted yarn manufacture 3T
*or* Staple fibre yarn manufacture 3T
Weaving mechanisms 2T
Cloth structure 2T
Cloth analysis 2T
Complex textiles
*or* Knitting 2T
Cloth finishing 1T
Mill management
Dyeing 1T

At the end of the third year, students will be required to present a dissertation on some approved textile subject.

*SCHEME B*

(To be taken only in special circumstances and with the approval of the head of the department)

First year *Three* of the following:
Mathematics 1A
*or* Mathematics 1Z
Physics 1A
Chemistry 1A
Engineering IS
*and* Textiles 1 comprising:
Textile chemistry 1C
Textile physics 1P
Textile engineering 1E
Textile technology (Raw materials 1T, Yarn manufacture 1T and Fabric manufacture 1T)

Second year *Two* of the following:
Mathematics 2T
Physics 2B
Chemistry 2A
Chemistry 4B
Chemistry 3E
Statistics with textile testing
*and* Textile engineering 2E
Fibre science I—selected courses including:
Textile chemistry 2C(ii)
Textile physics 2P(ii) and 2P(iii)
Textile technology comprising:
Raw materials 2T
Woollen yarn manufacture 2T
*or* Staple fibre yarn manufacture 2T

Worsted yarn manufacture 2T
*or* Staple fibre yarn manufacture 2T
Weaving mechanisms 1T
Cloth structure 1T
Cloth analysis 1T
Colour study 1T
Knitting 1T
Physical testing (methods)*
Physical testing (statistics) 1*

Third year — Fibre science II comprising:
Textile chemistry 3C(i), 3C(ii) and 3C(iii)
Textile physics 3P
Textile engineering 3E(i) and 3E(ii)
Textile technology comprising:
Woollen yarn manufacture 3T
*or* Staple fibre yarn manufacture 3T
Worsted yarn manufacture 3T
*or* Staple fibre yarn manufacture 3T
Weaving mechanisms 2T
Cloth structure 2T
Cloth analysis 2T
Complex textiles
*or* Knitting 2T
Cloth finishing 1T and 2T
Mill management
Dyeing 1T.

*The degree of Bachelor of Science with Honours in textile industries*

Fourth year — Following graduation with the Ordinary degree of Bachelor of Science in textile industries, candidates may obtain the degree with Honours in textile industries by presenting a thesis embodying the results of original research. In addition, they shall attend ancillary lectures and pass an appropriate examination.

*Scheme for the degree of Bachelor of Arts in special studies in textile design*

Particulars of this scheme will be found on pages 378 and fol.

*Scheme for the degree of Bachelor of Arts in textile management*

Particulars of this scheme will be found on page 380.

*Scheme for the degree of Bachelor of Commerce with textile industries as a principal subject*

Particulars of this scheme will be found on pages 443 and 446 and fol.

*Not to be taken by students who have passed, or are taking Statistics with textile testing.

**COLOUR CHEMISTRY:** The scheme of study leading to the degree of Bachelor of Science with Honours in Colour Chemistry extends over four years, but in exceptional circumstances suitably qualified candidates may be exempted from the first year and be able to complete the course in three years.

## *Course Requirement*

For admission to the four-year scheme of study passes in three approved subjects at advanced level are required.

*One* of these passes must be in chemistry.

The *second* and *third* should normally be in physics and mathematics.

Exemption from the first year of the four-year scheme may be granted on the basis of achievement in the advanced level examination.

## *Scheme of Study*

| | |
|---|---|
| First year | Mathematics 1A |
| | Physics 1A |
| | Chemistry 1B |
| Second year | Chemistry 2A |
| | Chemistry 3E |
| | Dyeing 1 |
| | Dyeing 2 |
| | Laboratory course in dyeing 1 |
| | General textile technology |
| Third year | Chemistry 4B |
| | Dyeing 3 |
| | Colour chemistry 4 |
| | Cloth finishing 1 and 2 |
| | Laboratory course in dyeing 2 |
| | Colour chemistry laboratory |
| | Engineering IS (lectures only) *or* Industrial management I |
| | *or* Chemical engineering General A and B |
| Fourth year | Colour chemistry 5 |
| | Colour chemistry 6 |
| | Colour chemistry 7 |
| | Colour chemistry 8 |
| | Dyeing 4 |
| | Colour chemistry laboratory |

Candidates for the degree with Honours in colour chemistry will be required to translate into English passages of French and German technical literature.

**DYEING:** A scheme of study extending over a period of three years and leading to the Ordinary degree of Bachelor of Science in Dyeing.

### *Course Requirement*

For admission to the scheme of study passes in three approved subjects at advanced level are normally required.

*One* of these passes must be in chemistry.

The *second* and *third* should normally be in physics and mathematics.

### *Scheme of Study*

| | |
|---|---|
| First year | Mathematics 1A |
| | Physics 1A |
| | Chemistry 1B |
| Second year | Chemistry 2A |
| | Chemistry 3E |
| | Dyeing 1 |
| | Dyeing 2 |
| | Laboratory course in dyeing 1 |
| | General textile technology |
| Third year | Dyeing 3 |
| | Colour chemistry 4 |
| | Engineering IS (lectures only) *or* Industrial management I |
| | *or* Chemical Engineering General A and B |
| | Cloth finishing 1 and 2 |
| | Laboratory course in dyeing 2 |
| | Colour chemistry laboratory |

Candidates for the ordinary degree in dyeing will be required to translate into English a passage of French or German technical literature.

**FOOD SCIENCE:** There are two schemes of study, one extending over four years and leading to the degree of Bachelor of Science with Honours in Food Science, the second extending over three years and leading to the Ordinary degree of Bachelor of Science in Food Science.

### *Course Requirement*

For admission to either scheme of study passes in three approved subjects at advanced level are normally required.

*One* of these passes must be in chemistry.

The *second* should normally be in mathematics or in botany, biology or zoology.

The *third* should normally be in physics.

For entry to the four-year Honours scheme of study the standard achieved in the advanced level examination must be such as to permit exemption from at least one of the following first-year courses: Chemistry 1A, Physics 1A, Botany 1A or Zoology 1A.

The Honours course cannot normally be completed in less than four years.

*Four-year scheme leading to the degree with Honours in food science*

| | |
|---|---|
| First year | Chemistry 1A with additional laboratory work<br>Physics 1A *or* Introductory Biophysics 1A<br>Botany 1A *or* Zoology 1A<br>Mathematics 1A *or* Statistics 2Z<br>Food technology F1 |
| Second year | Chemistry 3E<br>Chemistry 2D<br>Bacteriology 2A<br>Food technology F2 |
| Third year | Biochemistry 2A<br>Analytical chemistry and microscopy of natural products LF3<br>Chemistry of natural products LF4<br>Physics, chemistry and microbiology of food processes F4 taken in part in the departments of metallurgy and agriculture. |
| Fourth year | Physical and psychological properties of foodstuffs F5, *or* Agricultural bacteriology, including food bacteriology, taken in the department of agriculture<br>Food processing and preservation F6<br>Chemistry and structure of foodstuffs F7<br>Individual study and practical work F8 |

*Three-year scheme leading to the Ordinary degree in food science*

Candidates for the Ordinary degree scheme in food science will normally be expected to have passed chemistry, physics and either mathematics or a biological subject at advanced level in the General Certificate of Education.

| | |
|---|---|
| First year | Chemistry 1A with additional laboratory work<br>Botany 1A *or* Zoology 1A<br>Mathematics 1A *or* Statistics 2Z<br>Food technology F1 |
| Second year | Chemistry 3E<br>Chemistry 2D<br>Bacteriology 2A<br>Food technology F2 |
| Third year | Analytical chemistry and microscopy of natural products LF3<br>Chemistry of natural products LF4<br>Physics, chemistry and microbiology of food processes F4<br>Food processing and preservation F6<br>Individual study and practical work F8 (in part) |

Students reaching a sufficiently high standard at the end of either the first or second years may be transferred to the Honours course for the succeeding years.

**LEATHER SCIENCE:** There are two schemes of study in Leather Science, one leading to a degree with Honours, the second to an Ordinary degree; the first scheme leading to the Bachelor of Science with Honours in Leather Science may extend over four years but suitably qualified candidates may be able to complete the course in three years; the second extends over three years and leads to the Ordinary degree of Bachelor of Science in Leather Science.

### *Course Requirement*

For admission to both schemes of study passes in three approved subjects at advanced level are preferred but consideration is given to applicants who have only achieved passes in two subjects.

*One* pass must be in chemistry.

The *second* should normally be in physics.

The *third* should preferably be in mathematics.

Exemption from the first year of the four-year Honours scheme may be granted on the basis of achievement in the advanced level examination.

### *Four-year scheme leading to the degree with Honours in leather science*

| | |
|---|---|
| First year | Chemistry 1A *or* 1B with additional laboratory work<br>Physics 1A *or* Introductory Biophysics 1A<br>Technology of leather manufacture L1<br>An introductory course in an additional subject to be selected in consultation with the head of the department of food and leather science. |
| Second year | Chemistry 3E<br>Chemistry 2D<br>Technology of leather manufacture L2 |
| Third year | Bacteriology 2LI<br>Analytical chemistry and microscopy of natural products LF3<br>Leather science laboratory work L3<br>Chemistry of natural products LF4<br>Chemistry of leather manufacture L4 |
| Fourth year | Physical behaviour of leathers L5—parts 1 and 2<br>Principles and methods of leather manufacture L6<br>Advanced chemistry of leather manufacture L7—parts 1 to 3<br>Practical leather physics<br>Individual study, laboratory work and practical leather manufacture L8—parts 1 to 3. |

Suitably qualified candidates who are exempted from Chemistry 1A may take Chemistry 2D in their first year.

Suitably qualified candidates who are excused Physics 1A may take Bacteriology 2LI in their first year.

Suitably qualified candidates who are exempted from Chemistry 1A and excused Physics 1A may be permitted to complete the above scheme in three years.

### *Three-year scheme leading to the Ordinary degree in leather science*

The scheme of study for the first two years will be the same as the first two years for the four-year scheme leading to the degree with Honours in leather science.

Third year
- Bacteriology 2LI
- Analytical chemistry and microscopy of natural products LF3 (for part of session only)
- Chemistry of natural products LF4 (for part of session only)
- Principles and methods of leather manufacture L6
- Practical leather physics (for part of session only)
- Chemistry of leather manufacture L4
- Leather science laboratory work L3
- Practical leather manufacture L8

Persons upon whom the ordinary degree of Bachelor of Science has been conferred upon completion of the three-year scheme may qualify for the award of Honours in leather science by satisfactorily completing a further one-year course which may be arranged.

**AGRICULTURE:** There are two schemes of study, one extending over four years and leading to the degree of Bachelor of Science with Honours in Agriculture, the second extending over three years and leading to the Ordinary degree of Bachelor of Science in Agriculture.

### *Course Requirement*

For admission to either scheme of study passes in two approved subjects at advanced level are required.

*One* of these passes should normally be in chemistry.

The *second* should be in an approved science subject.

### *Three-year scheme leading to the Ordinary degree of Bachelor of Science in agriculture*

First year
- Botany 1A *or* 1B
- Zoology 1A
- Chemistry 1A *or* 1B
- General economics

Second year
- Agriculture 1, 2 and 3
- Agricultural economics 1
- Agricultural botany 1
- Agricultural chemistry 2
- Animal physiology and veterinary science

| | |
|---|---|
| | *either* Agricultural bacteriology |
| | *or* Agricultural zoology |
| Third year | Agriculture 1, 2 and 3 |
| | Agricultural chemistry 1 |
| | Agricultural botany 2 |
| | Agricultural economics 2 |

*Examinations*

| | |
|---|---|
| First year | Botany 1A or 1B—1 paper and 1 practical examination |
| | Chemistry 1A or 1B—1 paper and 1 practical examination |
| | Zoology 1A—1 paper and 1 practical examination |
| | General economics—1 paper |
| Second year | Agricultural botany 1—1 paper and 1 practical examination |
| | Agricultural chemistry 2—1 paper and 1 practical examination |
| | Animal physiology and veterinary science—1 paper and 1 practical examination |
| | *either* Agricultural bacteriology / *or* Agricultural zoology } 1 paper and 1 practical examination |
| Third year | Agriculture 1, 2 and 3—3 papers |
| | Agricultural economics 1 and 2—2 papers |
| | Agricultural botany 2—1 paper and 1 practical examination |
| | Agricultural chemistry 1—1 paper and 1 practical examination. |

*Four-year scheme leading to the degree of Bachelor of Science with Honours in agriculture*

The scheme of study for the first, second and third years will be the same as that for the three-year scheme leading to the Ordinary degree of Bachelor of Science in agriculture.

The fourth year involves specialisation in agronomy and crop husbandry, in animal husbandry or in farm management and includes:

Agriculture 4
Agriculture 5

Candidates will be required to submit a dissertation on a subject to be approved.

*Examinations*

The examinations for the first three years will be as for the scheme for the ordinary degree of Bachelor of Science in agriculture

In the fourth year:

Agriculture 4—1 paper
Agriculture 5—2 papers
Dissertation (and/or farm assessment for students taking the farm management specialisation).

**AGRICULTURAL BOTANY:** A scheme of study extending over four years and leading to the degree of Bachelor of Science with Honours in Agricultural Botany.

### *Course Requirement*

For admission to the scheme of study passes in two approved subjects at advanced level are required.

*One* of these passes must be in botany or biology.

The *second* must be in chemistry.

### *Scheme of Study*

| | |
|---|---|
| First year | Botany 1A *or* 1B |
| | Chemistry 1A *or* 1B |
| | Principles of agriculture |
| | One other approved course. |
| Second year | Botany 2A |
| | *Agricultural botany G1 |
| | Chemistry 2B |
| Third year | Botany 3A |
| | *Agricultural botany G2 |
| | Chemistry 3C (first term only) |
| | Students will also attend lectures in Agricultural chemistry G1 |
| Fourth year | Agricultural botany (advanced) |
| | Statistics (Agric.) |

**AGRICULTURAL CHEMISTRY:** A scheme of study extending over four years and leading to the degree of Bachelor of Science with Honours in Agricultural Chemistry.

### *Course Requirement*

For admission to the scheme of study passes in two approved subjects at advanced level are required.

*One* of these passes must be in chemistry.

The *second* must be in physics, or mathematics or biology.

Candidates not having a pass in physics at advanced level must have a pass at ordinary level.

### *Scheme of Study*

| | |
|---|---|
| First year | Chemistry 1A *or* 1B |
| | Physics 1A |
| | Principles of agriculture |
| | *either* Geology 1C |
| | *or* Zoology 1A |
| Second year | Chemistry 2A |
| | Agricultural chemistry G2 (lectures only) |
| | *either* Physiology 2B (after Zoology 1A) |
| | *or* Geology 2C (after Geology 1C) |

*Agricultural botany G1 and G2 are given in alternate years.

| | |
|---|---|
| Third year | Chemistry 3E<br>Chemistry 4B<br>Agricultural chemistry G1 (lectures only)<br>Agricultural bacteriology |
| Fourth year | Agricultural chemistry (advanced)<br>Statistics (Agric.) |

**AGRICULTURAL ECONOMICS:†** A scheme of study extending over four years and leading to the degree of Bachelor of Science with Honours in Agricultural Economics.

*Course Requirement*

For admission to the scheme of study passes in two approved subjects at advanced level are required. These passes may be in any subject, but candidates not having a pass in mathematics at advanced level must have a pass at least to ordinary level.

*Scheme of Study*

| | |
|---|---|
| First year | *The structure and working of the economy<br>*Production, consumption and markets<br>*Introduction to economic and social statistics<br>*English economic history 1066-1914<br>Principles of agriculture |
| Second year | *Money and banking<br>*Public finance<br>*Economics of industry<br>*Industrial relations<br>*Recent economic history<br>*Second-year economics seminar<br>Agricultural economics 1 |
| Third year | *Third-year economics seminar<br>*Revision class or tutorial<br>*Methods of economic and social statistics<br>Agricultural economics 2<br>Farm organisation and management |
| Fourth year | Agricultural economics (advanced)<br>Statistics (Agric.)<br>Dissertation. |

†With effect from October, 1965.

*These courses are described under "Courses in the Faculty of Economics and Social Studies", p. 448.

*Examinations*

| | |
|---|---|
| First year | Economics—4 papers<br>English economic history—2 papers<br>Principles of agriculture—1 paper |
| Third year | Economic theory—1 paper<br>Money and finance—1 paper<br>Economics of industry—1 paper<br>Industrial relations—1 paper<br>Recent economic history—1 paper<br>Methods of economic and social statistics—1 paper<br>Farm organisation and management—1 paper |
| Fourth year | Agricultural economics (advanced)—3 papers<br>Dissertation. |

**AGRICULTURAL BACTERIOLOGY:** A student wishing to specialise in this field should apply to the department of bacteriology, declare his interest in agricultural bacteriology and arrange to take the optional specialisation available in this subject.

**AGRICULTURAL ZOOLOGY:** A student wishing to specialise in this field should apply to the department of zoology for admission to the scheme leading to the degree of B.Sc. in special studies in zoology. At the same time he should state his interest in agricultural zoology and arrange to take the optional specialisation available in this subject.

# REGULATIONS PRESCRIBING SCHEMES OF STUDY FOR THE DEGREE OF MASTER OF SCIENCE

## STRUCTURAL ENGINEERING

The scheme of study consists of four courses each comprising about fifty lectures together with the preparation of a dissertation on a topic of engineering analysis, design or research, or a design project approved by the head of the department of civil engineering.

The degree will be awarded on the result of an examination after satisfactory completion of the course; and on the submission of a satisfactory dissertation. The subjects of examination will be:

Structural analysis (1 paper)
together with three of the following:
Concrete structures (1 paper)
Theory of shell structures (1 paper)
Foundation engineering (1 paper)
Theory of steel structures (1 paper)
An approved alternative subject, to be chosen in consultation with the head of department (1 paper).

The courses of lectures will extend over one session.

## BEARING DESIGN, LUBRICATION, FRICTION AND WEAR

Candidates accepted under Article 17 of the Ordinance may proceed by:

(a) attending a course of up to 200 lectures on major topics as follows:

1. Viscous flow. Physical properties of lubricants. Viscometry. Isothermal, incompressible theory for steadily loaded fluid film bearings.
2. Machine dynamics. Dynamically loaded bearings. Heat transfer. Thermal effects in fluid film bearings. Flow instability. High speed effects in fluid film bearings. Gas dynamics. Gas bearings.
3. Elasticity and plasticity. Theories of dry friction.
4. Boundary lubrication. Chemical properties of lubricants. Additives. Metrology. Surfaces. Surface failure and wear.
5. Lubrication analysis of machine components. Rolling contact bearings. Gears. Cams. Disc machines.
6. Bearing materials. Bearing selection and design. Numerical analysis. Hydraulic circuits. Brakes. Tyres.

(b) carrying out design and experimental projects.

*Examinations*

The examinations will normally consist of not more than six papers as follows:

1. Fluid film lubrication I
2. Fluid film lubrication II
3. Mechanics of dry contact, wear and lubrication I
4. Mechanics of dry contact, wear and lubrication II
5. Analysis of machine elements I
6. Analysis of machine elements II

and an assessment of:

(i) a complete design, with technical report, and

(ii) a report on an experimental and/or analytical assignment, this amounting to a piece of minor personal research.

Candidates will be required to satisfy the examiners both in written papers and in the assessment of the project work.

The degree of Master of Science in applied science subjects is governed by ordinance V, articles 12 to 20 and relevant regulations which will be found on pages 475 and 481.

**GEOPHYSICS:** For details of the scheme of study leading to the degree of Master of Science by examination in Geophysics, see Faculty of Science, page 523.

# REGULATIONS AND SCHEMES OF STUDY FOR DIPLOMAS IN APPLIED SCIENCE

## ENGINEERING

*The postgraduate diploma in concrete technology*

The scheme of study extends over one session and will include the following:

Lectures, occupying nine hours a week, on:

Developments and research in the properties of concrete
Reinforced concrete design
Prestressed concrete design
Structural analysis
Design of shells and slabs
Engineering foundations
Soil mechanics

Laboratory work occupying three hours a week

Design or research project occupying nine hours a week.

The diploma will be awarded on the result of an examination after satisfactory completion of the course. The subjects of examination will be:

Properties of concrete (1 paper)
Theory of reinforced and prestressed concrete (1 paper)
Structural analysis (1 paper)
Analysis and design of shells, slabs and foundations (1 paper)
Reinforced and prestressed concrete design (1 paper)

Design scheme or research report: presentation of a written report embodying the calculations and drawings of an approved design scheme or the presentation of the results of a short research project carried out during the course.

The diploma may be awarded with distinction when the work of a student is of outstanding merit.

## FUEL SCIENCE, FUEL ENGINEERING, CERAMICS, CHEMICAL ENGINEERING AND METALLURGY

*The postgraduate diplomas in fuel science, fuel engineering, chemical engineering, ceramics and metallurgy*

Schemes of study extending over one, two or three years lead to the postgraduate diplomas in fuel science, fuel engineering, chemical engineering, ceramics and metallurgy. They have been designed primarily to provide systematic training in advanced technology for Bachelors of Science who have graduated in pure science or in engineering and for non-graduates whose qualifications have been accepted by the Senate in place of a degree. The two- and three-year schemes involve full-time research work; the one-year scheme consists solely of advanced study.

Individual schemes of study will be determined in consideration of the qualifications of candidates and will include some or all of the following:

A. Preliminary training in technological subjects with additional work in pure science and engineering as required.

B. Advanced study in technology based on appropriate courses prescribed for the degree of Bachelor of Science with Honours.

C. Further advanced study and research in the chosen field.

Well qualified graduates will normally take B only and may qualify for a diploma after one year of attendance. Graduates who take B and C consecutively and attend for two years, may after passing the prescribed examinations and presenting a thesis on their research qualify for the degree of Master of Science.

Non-graduates will normally take A and B consecutively and may then qualify for a diploma after two years of attendance. Alternatively, they may take A, B and C consecutively and may then, after passing the prescribed examinations and presenting a thesis on their research, qualify for the degree of Master of Science.

The postgraduate courses in fuel technology, fuel engineering, ceramics, metallurgy and chemical engineering have been accepted by the Department of Scientific and Industrial Research as suitable for the tenure of its Advanced course studentships.

## APPLIED MINERAL SCIENCES

*The postgraduate diploma in mineral dressing and coal preparation*

1. Candidates will normally be awarded the diploma in mineral dressing and coal preparation after satisfactory attendance at the course and after passing the appropriate examinations at the end of the period of study; in the case of graduates this will normally be one year.*

2. The syllabus will consist of the following courses:

Mineral dressing and coal preparation (lectures)
Mineral dressing and coal preparation (laboratory)
Plant design and layout
Statistics 2 Z
Elementary unit operations
A selection of the following:
- Fuel Introductory
- Coal science
- Metallurgy Introductory
- Metallurgy 2
- Surveying.

*Holders of an approved degree and of the diploma may spend a further year in research in mineral dressing or coal preparation and will be eligible to apply for acceptance as candidates for the award of the degree of Master of Science.

*The postgraduate diploma in applied geophysics*

1. A one-year postgraduate scheme of study is available for those wishing to qualify for a diploma in applied geophysics.

2. Candidates must be graduates in mining, geology or physics of any British university.

3. Candidates for the diploma may be required to spend a preliminary period of up to six weeks on some form of geophysical field work.

4. The scheme will consist of instruction in the principles and application of geophysics to the problems of mining, geology and oil exploration.

5. In addition to geophysics, the course of instruction will include the lectures and practical work of such following subjects as have not previously formed part of the degree scheme taken by the candidate: geology, physics and mathematics. Candidates must already have taken these subjects at the Introductory level.

6. Candidates will normally be awarded the diploma in geophysics after satisfactory attendance and after passing the appropriate examinations at the end of the period of study. Holders of the diploma may spend a further year in research in geophysics and will be eligible to apply for acceptance as candidates for the award of the degree of Master of Science.

7. The syllabus will consist of the following courses:

Applied geophysics (lectures, laboratory and field work)
Structural geology
Economic geology (mining)
Coalfield geology
Oilfield development
Statistics 2 Z.

## TEXTILE INDUSTRIES

*The postgraduate diploma in textile industries*

The scheme of study is intended for graduates in science and technology who propose to take up a career in the textile industry, as well as for graduates who have been employed for some years and wish to have formal training in modern theory and practice.

First year — Lectures and practical work selected from the scheme leading to the degree of Bachelor of Science with Honours in textile industries in accordance with the previous training of the graduate and the section of the industry for which he is intended. Graduates in textile technology may apply for exemption from this part of the scheme.

Second year — Research, on which a thesis must be presented, and four courses of lectures and laboratory work selected from the following:

(a) Molecular structure and physical properties of high polymers, with particular reference to the structure and properties of textile fibres.

(b) Chemistry of natural and man-made fibres.

(c) Applied chemistry: the chemistry of industrial processes, including those used in the manufacture of man-made fibres.

(d) Textile engineering: mathematical analysis of the manipulation of fibres in processes up to and including yarn manufacture; the mathematics of fabric construction; critical studies of textile machinery; survey of recent developments in the design of textile machinery, instruments and control in textile machiney.

(e) Statistical methods in the study and control of textile processes.

*The diploma in textile industries*

The scheme of study will include:

First year
- Textile mathematics 1A
- Textile physics 1A
- Textile chemistry 1A
- Textile engineering 1E
- Raw materials 1T and 2T
- Yarn manufacture 1T
- Fabric manufacture 1T
- Textile calculations 1A and 1B
- Physical testing (statistics) 1A
- Colour study 1T
- Cloth analysis 1A

Second year
- Textile engineering 2E
- Textile chemistry 2A
- Textile physics 2A
- Woollen yarn manufacture 2T
- *or* Staple fibre yarn manufacture 2T
- Worsted yarn manufacture 2T
- *or* Staple fibre yarn manufacture 2T
- Weaving mechanisms 1T
- Cloth analysis 2A
- Cloth structure 1T
- Knitting 1A
- Colour study 2T
- Textile testing 1A

Third year
- Textile physics 3A
- Textile chemistry 3A
- Woollen yarn manufacture 3T
- *or* Staple fibre yarn manufacture 3T
- Worsted yarn manufacture 3T
- *or* Staple fibre yarn manufacture 3T

Weaving mechanisms 2T
Cloth structure 2T
Complex textiles
*or* Knitting 2T
Cloth finishing 1T and 2T
Dyeing 1T
Mill management

Candidates must combine the above courses of study with at least one of the following groups of courses:

1. Mathematics 1A *or* Mathematics 1Z
   Physics 1A
   Chemistry 1A
2. Applied economics B
   Textile economics
3. Two courses selected from the following:
   French general studies first year
   German general studies one-year course
   Russian general studies one-year course
   Spanish general studies one-year course
4. Principles of pattern design

and must reach a satisfactory standard in the appropriate examinations. Candidates who choose group 2 are strongly recommended to take group 4 as well, and suitable provision has been made in the time tables.

During the third year, candidates must present twenty-four selected worksheets and a thesis based on some approved textile research. Three copies of the thesis, bound in the form prescribed by the University, should be submitted by 1 June. Two copies will be retained by the University library.

The diploma with distinction may be awarded to candidates whose work is adjudged to be of outstanding merit.

## FOOD SCIENCE

*The postgraduate diploma in food science*

The scheme of study extends over one or two years and is primarily intended for Bachelors of Science who have graduated in pure science or chemical engineering and for non-graduates whose qualifications have been accepted by the Senate in place of a degree.

Individual schemes of study will be determined in relation to the qualifications of the candidates and will include some or all of the following:

1. Preliminary training in food science selected from the scheme leading to the degree of Bachelor of Science with Honours, with additional work in pure science as required.
2. Advanced training in food science based on courses from the final year of the scheme leading to the degree of Bachelor of Science with Honours.
3. Further advanced study and research in food science or related fields.

## LEATHER SCIENCE

*The diploma in leather manufacture*

The scheme of study which extends over three years will include:

First year
- Chemistry 1A *or* 1B
- Technology of leather manufacture L1
- Introductory courses in two additional subjects.

Second year
- Chemistry 2B
- Technology of leather manufacture L2
- Practical leather physics.

Third year
- Analytical chemistry and microscopy of natural products LF3
- Chemistry of natural products LF4 (for part of session only)
- Chemistry of leather manufacture L4
- Principles and methods of leather manufacture L6
- *either* Chemistry of natural products LF4 (remainder of course) *or* one part selected from:
  - Physical behaviour of leathers L5 parts 1 and 2
  - Advanced chemistry of leather manufacture—L7 parts 1-3
- Part or the whole of Analytical chemistry and microscopy of natural products LF3 may be taken in the second year.

Further practical work based on leather science laboratory work L3 and practical leather manufacture L8 will be carried out in the second and third years.

In certain circumstances and on the recommendation of the head of the department the diploma may be awarded upon the completion of a scheme of study prescribed for the degree of Bachelor of Science in leather science.

A student producing evidence of adequate previous scientific or practical training may, upon application to the Senate, be exempted from a portion of the normal course and may qualify for the diploma after a shortened period of study.

*The postgraduate diploma in leather science*

The scheme of study extends over one or two years and is primarily intended for Bachelors of Science who have graduated in pure science or in engineering, and for non-graduates whose qualifications have been accepted by the Senate in place of a degree.

Individual schemes of study will be determined in relation to the qualifications of the candidates and will include some or all of the following:

1. Preliminary training in leather science selected from the scheme leading to the degree of Bachelor of Science with Honours, with additional work in pure science as required.

2. Advanced training in leather science based on courses from the final year of the scheme leading to the degree of Bachelor of Science with Honours.

3. Further advanced study and research in leather science or related fields.

## AGRICULTURE

*The postgraduate diploma in agriculture* (*farm management*)

The scheme of study which extends over one year is designed for persons who have taken a degree in agriculture and who wish to undertake further study in farm management.

| | |
|---|---|
| First term | Agriculture |
| | Farm management |
| | Statistics (Agric.) |
| | Teaching method |
| | Colloquium |
| | Field work |
| Second term | Agriculture |
| | Farm management |
| | Statistics (Agric.) |
| | Teaching method |
| | Colloquium |
| | Field work |
| Third term | Agriculture |
| | Farm management |
| | Statistics (Agric). |
| | Colloquium |
| | Field work |

The diploma is governed by the following regulations:

1. Before entry upon the scheme of study candidates shall satisfy the head of the department of agriculture that they have worked for at least twelve consecutive months on an approved farm, that they have an adequate knowledge of practical farming and that their attainments in agriculture and agricultural economics are satisfactory.

2. Candidates must attend satisfactorily the courses [including farm classes, demonstrations and excursions] prescribed in the scheme of study.

3. To obtain the diploma candidates must satisfy the examiners appointed by the University in the examination held at the conclusion of the course. The examination will comprise at least three papers and an oral examination.

4. Candidates must submit a dissertation and/or a farm assessment as determined by the head of the department.

*The postgraduate diploma in agricultural bacteriology*

The scheme of study which extends over one year is designed primarily for persons who have graduated in agriculture and who wish to obtain specialised training in the various branches of agricultural bacteriology.

| | |
|---|---|
| First term | Agricultural bacteriology |
| | Biochemistry 3B |
| | Statistics (Agric.) |

| | |
|---|---|
| | Agricultural botany |
| | Animal physiology and veterinary science |
| Second term | Agricultural bacteriology |
| | Biochemistry 3B |
| | Statistics (Agric.) |
| Third term | Agricultural bacteriology |
| | Biochemistry 3B |

The diploma is governed by the following regulations:

1. Before entry upon the scheme of study candidates shall satisfy the head of the department of agriculture that their attainments in agricultural bacteriology, agricultural botany and agricultural chemistry are adequate.

2. Candidates must attend satisfactorily the courses prescribed in the scheme of study.

3. To obtain the diploma candidates must satisfy the examiners appointed by the University in the examination held at the conclusion of the course. The examination will comprise four papers: three in agricultural bacteriology and one in Biochemistry 3B, together with a practical examination in agricultural bacteriology.

*The postgraduate diploma in agricultural botany**

The scheme of study which extends over one year is designed primarily for graduates with satisfactory attainments in botany who wish to develop careers as research workers, teachers or advisers in agricultural botany.

| | |
|---|---|
| First term | Agricultural botany |
| | Principles of agriculture |
| | Statistics (Agric.) |
| Second term | Agricultural botany |
| | Principles of agriculture |
| | Agricultural zoology |
| | Statistics (Agric.) |
| Third term | Agricultural botany |
| | Principles of agriculture |

The diploma is governed by the following regulations:

1. Candidates must attend satisfactorily the courses [including farm classes and excursions] prescribed in the scheme of study.

2. To obtain the diploma candidates must satisfy the examiners appointed by the University in the examination held at the conclusion of the course. The examination will comprise three papers and a practical examination.

*In abeyance.

*The postgraduate diploma in plant pathology**

The scheme of study which extends over one year is primarily designed for graduates with satisfactory attainments in botany who wish to follow careers as research workers, as teachers or as field workers in plant pathology.

The scheme of study will involve whole-time work, mainly in the agricultural botany section of the department of agriculture but with some lectures in the sections of agricultural bacteriology, agricultural chemistry and agricultural zoology. The scheme is intended to give a sound introduction to the scientific study of plant diseases with special consideration of the problems they present in actual crop husbandry practice.

| | |
|---|---|
| First term | Plant pathology |
| | Statistics (Agric.) |
| | Agricultural bacteriology |
| Second term | Plant pathology |
| | Statistics (Agric.) |
| | Agricultural entomology |
| Third term | Statistics (Agric.) |
| | Plant pathology |

The diploma is governed by the following regulations:

1. Candidates must attend satisfactorily the lectures, practical classes and periods of field instruction prescribed in the scheme of study.

2. To obtain the diploma candidates must satisfy the examiners appointed by the University in the examination held at the conclusion of the course. The examination will comprise three papers and a practical examination.

*The postgraduate diploma in agricultural chemistry*

The scheme of study which extends over one year is primarily intended for graduates with satisfactory attainments in pure chemistry and some general knowledge of agricultural chemistry who wish to develop careers as research workers, teachers, or advisers in agricultural chemistry.

| | |
|---|---|
| First term | The chemistry of soil |
| | The chemistry of nutrition |
| | Principles of agriculture |
| | Agricultural bacteriology |
| | Statistics (Agric.) |
| | Colloquium |
| Second term | The chemistry of soil |
| | The chemistry of nutrition |
| | The chemistry of fertilisers, fungicides and insecticides |
| | Principles of agriculture |
| | Agricultural bacteriology |
| | Statistics (Agric.) |
| | Colloquium |

*This diploma is at present in abeyance.

Third term
The chemistry of soil
The chemistry of nutrition
The chemistry of fertilisers, fungicides and insecticides
Principles of agriculture
Statistics (Agric.)
Colloquium.

The diploma is governed by the following regulations:

1. The course is open to graduates in chemistry who have passed the examinations of the University in Agricultural chemistry G1 and G2 or who have passed equivalent examinations in agricultural chemistry in some other institution.

2. Candidates must attend satisfactorily the courses [including farm classes and excursions] prescribed in the scheme of study.

3. To obtain the diploma candidates must satisfy the examiners appointed by the University in the examination held at the conclusion of the course. The examination will comprise three papers and a two-day practical examination in agricultural chemistry.

*The postgraduate diploma in agricultural economics*

The scheme of study which extends over one year is primarily designed to provide training as research workers, teachers or advisers for persons who have graduated with Honours in economics.

The scheme of study will include:

Production and distribution of agricultural income
Statistics (Agric.)
Principles of agriculture
*Two* of the following:
  Rural social organisation
  Economics of farm management
  Land economics
  Marketing of agricultural products
Tutorials.

The diploma will be governed by the following regulations:

1. Candidates must attend satisfactorily the courses [including farm classes and excursions] prescribed in the scheme of study.

2. To obtain the diploma candidates must satisfy the examiners appointed by the University in the examination to be held at the conclusion of the course. The examination will comprise four three-hour papers.

3. Candidates must present a thesis on a subject approved by the head of the agricultural economics section of the department of agriculture. Three copies of the thesis must be received by the Registrar not later than 15 May in the session of study.

*The postgraduate diploma in agricultural zoology*

The scheme of study which extends over one year is primarily intended for graduates with satisfactory attainments in pure zoology who wish to develop careers as research workers, teachers or advisers in agricultural zoology.

| | |
|---|---|
| First term | Agricultural zoology<br>Principles of agriculture<br>Statistics (Agric.) |
| Second term | Agricultural zoology<br>Principles of agriculture<br>Agricultural botany<br>Statistics (Agric.) |
| Third term | Agricultural zoology<br>Principles of agriculture<br>Statistics (Agric.) |

The diploma is governed by the following regulations:

1. The course is open to graduates in zoology who have pursued a suitable course in entomology.

2. Candidates must attend satisfactorily the courses [including farm classes and excursions] prescribed in the scheme of study.

3. To obtain the diploma, candidates must satisfy the examiners appointed by the University in the examination held at the end of the course. The examination will comprise three papers and a practical examination.

# COURSES IN THE FACULTY OF TECHNOLOGY

The following pages give information concerning courses given in the Faculty of Technology. The information is arranged under the several departments in the Faculty and an indication is given of the degrees or other qualifications for which the courses are normally attended. Enquiries should be addressed to the sub-dean of the Faculties of Science and Technology, the tutor of women students or the appropriate head of department.

In most cases the name of each course is given first together with a reference number on the right side of the page. This is followed by the year of the student's career in which the course is normally attended followed by the days on which and, where sufficiently firmly established, the hours at which lectures are normally given. A brief indication is given of the content of the course and finally, where appropriate, particulars of the examination set on the subject matter. The scope of examinations, however, is often wider than that of single courses.

## ENGINEERING

The courses in engineering specified in the schemes of study on pages 558 and fol. are subdivided as shown below. The Roman numeral following the name of each course denotes the year in which the course is normally taken. The letter indicates the department in which the course is taken [C—civil engineering; M—mechanical engineering; E—electrical engineering, with the letter S indicating supplementary courses]. The final Arabic numeral denotes the subject of the course.

### Civil Engineering

*Engineering I* consists of:

| | |
|---|---|
| *Civil engineering | I C |
| Mechanical engineering | I SM |
| Electrical engineering | I SE |
| Engineering laboratory and drawing office | |

*Engineering II* consists of:

| | |
|---|---|
| Theory and design of structures | II C 1A |
| Structural analysis | II C 1B |
| Public health engineering and *Surveying | II C 2, 3 |
| Soil mechanics and Highway engineering | II C 4, 8 |
| Strength of materials | II C 6, 9 |
| Fluid mechanics | II C 7 |
| Civil engineering drawing and design | II C 11 |
| Engineering laboratory | |
| and *one* of the following: | |
| Architecture and planning | II C 5 |
| Electric power engineering | II SE 1 |
| Theory of machines | II SM 3 |
| Production engineering | II M 5 |
| An approved alternative subject | |

* Easter vacation surveying course of two weeks in addition.

*Engineering IIIA* [for the ordinary degree and for Scheme A of the degree with Honours] consists of:

| | |
|---|---|
| Theory and design of structures | III C 1 |
| Soil mechanics | III C 4 |
| Civil engineering drawing and design | III C 11 |
| Civil engineering laboratory | |
| and *three* of the following: | |
| Public health engineering | III C 2 |
| Surveying (with additional fieldwork) | III C 3 |
| Architecture and planning | III C 5 |
| Stress analysis | III C 6 |
| Hydrology and water engineering | III C 7 |
| Highway engineering | III C 8 |
| Aircraft structures | III C 9 |
| Theory and design of shells | III C 10 |
| An approved alternative subject | |

*Engineering IIIB* [for Scheme B of the degree with Honours] consists of:

| | |
|---|---|
| Theory and design of structures | III C 1 |
| Soil mechanics | III C 4 |
| Civil engineering drawing and design | III C 11 |
| Civil engineering laboratory | |
| and *seven* of the following: | |
| Public health engineering | III C 2 |
| Surveying (with additional fieldwork) | III C 3 |
| Architecture and planning | III C 5 |
| Stress analysis | III C 6 |
| Hydrology and water engineering | III C 7 |
| Highway engineering | III C 8 |
| Aircraft structures | III C 9 |
| Theory and design of shells | III C 10 |
| An approved alternative subject | |

*Engineering IV* consists of:

*Three* of the following:

| | |
|---|---|
| Theory and design of structures | IV C 1A |
| Structural analysis | IV C 1B |
| Public health engineering | IV C 2 |
| Surveying | IV C 3 |
| Soil mechanics | IV C 4 |
| Architecture and planning | IV C 5 |
| Stress analysis | IV C 6 |
| Hydrology and water engineering | IV C 7 |
| Highway engineering | IV C 8 |
| Aircraft structures | IV C 9 |
| Theory and design of shells | IV C 10 |
| An approved alternative subject | |

MECHANICAL ENGINEERING

*Engineering I* consists of:

| | |
|---|---|
| Strength of materials | I M 1 |
| Engineering thermodynamics | I M 2 |
| Theory of machines | I M 3 |
| Fluid mechanics | I M 4 |
| Engineering measurements | I M 5 |
| Civil engineering | I S C |
| Electrical engineering | I S E |
| Engineering drawing | I M 6 |
| Graphical and numerical analysis | I M 7 |
| Engineering laboratory | |

*Engineering IIR* consists of:

| | |
|---|---|
| Strength of materials | II RM 1 |
| Engineering thermodynamics | II RM 2 |
| Theory of machines | II RM 3 |
| Fluid mechanics | II RM 4 |
| Electronic engineering | II SE 2 |
| Drawing and design | II RM 6 |
| Graphical and numerical analysis | II RM 7 |
| Engineering laboratory | |
| and *either* A option: | |
| Electric power engineering | II SE 1 |
| Theory and design of structures | II SC 1 |
| and *one* of the following: | |
| Production engineering | II RM 5 |
| Nuclear engineering | II RM 8 |
| *or* B option: | |
| Production engineering | II RM 5 |

*Engineering IIA* consists of:

| | |
|---|---|
| Strength of materials | II M 1 |
| Engineering thermodynamics | II M 2 |
| Theory of machines | II M 3 |
| Fluid mechanics | II M 4 |
| Electronic engineering | II SE 2 |
| Theory and design of structure | II SC 1 |
| Drawing and design | II M 6 |
| Graphical and numerical analysis | II M 7 |
| Engineering laboratory | |
| *and*, for those taking Mathematics 3T (course components A, C and D), *one* of the following options; *or*, for those taking Mathematics 3T (course components C and D), two of the following options: | |
| Electric power engineering | II SE 1 |
| Production engineering | II M 5 |
| Nuclear engineering | II M 8 |

| | |
|---|---|
| *Engineering IIB* consists of: | |
| Strength of materials | II M 1 |
| Engineering thermodynamics | II M 2 |
| Theory of machines | II M 3 |
| Fluid mechanics | II M 4 |
| Production engineering | II M 5 |
| Electronic engineering | II SE 2 |
| Drawing and design | II M 6 |
| Graphical and numerical analysis | II M 7 |
| Engineering laboratory | |
| *Engineering IIIR* consists of: | |
| Strength of materials | III RM 1 |
| Engineering thermodynamics | III RM 2 |
| Engineering dynamics | III RM 3 |
| Fluid mechanics | III RM 4 |
| Drawing and design | III RM 6 |
| Graphical and numerical analysis | III RM 7 |
| Engineering laboratory | |
| and *either* | |
| Engineering administration | III RM 5 |
| *or* Nuclear engineering | III RM 8 |
| *Engineering III* consists of: | |
| Strength of materials | III M 1 |
| Engineering dynamics | III M 3 |
| Drawing and design | III M 6 |
| Graphical and numerical analysis | III M 7 |
| Engineering laboratory | |
| and | |
| *either* A option | |
| Engineering thermodynamics | III M 2 |
| Fluid mechanics | III M 4 |
| *or* B option | |
| Engineering production and administration | III M 5 |
| *Engineering IV* consists of: | |
| *Three* of the following: | |
| Solid mechanics (*a*) Elasticity | IV M1A |
| (*b*) Plasticity | IV M1B |
| (*c*) Surface contact | IV M1C |
| Thermodynamics (*a*) Combustion | IV M2A |
| (*b*) Heat transfer | IV M 2B |
| Engineering dynamics (*a*) Vibration theory | IV M 3A |
| (*b*) Control theory | IV M 3B |
| Dynamics of fluids (*a*) Viscous flow | IV M 4A |
| (*b*) Turbulent flow | IV M 4B |
| (*c*) High speed flow | IV M 4C |
| Planning and control of production | IV M 5 |

ELECTRICAL ENGINEERING

*Engineering I S* consists of:

| | |
|---|---|
| Civil engineering | I SC |
| Mechanical engineering | I SM |
| Engineering laboratory and drawing office | |

*Engineering II* consists of:

| | |
|---|---|
| Electromechanical devices and systems | II E 1 |
| Electric circuit theory | II E 2 |
| Electromagnetism | II E 3 |
| Power systems | II E 4 |
| Fundamentals of electron devices | II E 5 |
| Electronic engineering | II E 6 |
| Electrical measurements | II E 9 |
| Engineering laboratory | |

*Engineering III* consists of:

**Scheme A*

| | |
|---|---|
| Electric machines | III E 1 |
| Electric circuit theory | III E 2 |
| Electromagnetism | III E 3 |
| Power systems | III E 4 |
| Fundamentals of electron devices | III E 5 |
| Control engineering | III E 8 |
| Engineering laboratory | |
| Project or dissertation with colloquium | |

**Scheme B*

| | |
|---|---|
| Electric circuit theory | III E 2 |
| Electromagnetism | III E 3 |
| Fundamentals of electron devices | III E 5 |
| Electronic engineering | III E 6 |
| Electromagnetic wave propagation | III E 7 |
| Control engineering | III E 8 |
| Engineering laboratory | |
| Project or dissertation with colloquium | |

*Engineering IV* consists of:

**Two* of the following:

| | |
|---|---|
| General theory of electric machines | IV E 1 |
| Electric circuit theory | IV E 2 |
| Electromagnetism | IV E 3 |

* One subject may be replaced by a mechanical engineering subject with the approval of the head of the department.

| | |
|---|---|
| Power systems | IV E 4a |
| High voltage engineering | IV E 4b |
| Electronic engineering | IV E 6 |
| Electromagnetic wave propagation | IV E 7 |
| Control engineering | IV E 8 |
| Acoustical engineering | IV E 10 |
| Microwave theory and techniques | IV E 11 |

AUXILIARY COURSES

*Introductory courses*

Introductory courses in engineering involve three hours' lectures a week and drawing office work under special arrangements. The course covers civil, mechanical and electrical engineering subjects, namely, Engineering I SC, I SM and I SE.

*Engineering G1 and G2.* There are two General courses, each consisting of three subjects chosen from the following:

| | |
|---|---|
| Theory and design of structures | Hydraulics |
| Strength of materials | Electric power engineering |
| Heat engines | Electronic engineering |
| Theory of machines | |

Each course involves three lecture hours and approximately three hours of laboratory work a week and candidates taking both courses will study at least six of the subjects listed. They must already have passed or been exempted from the examination on the Introductory course in engineering and those who wish to take electronic engineering must have taken or must take simultaneously electric power engineering or an approved course in physics.

*Electrical engineering G1 and G2.* There are two additional General courses in electrical engineering [Electrical engineering G1 and Electrical engineering G2] which may be taken for the degree in general studies in conjunction with physics.

To take Electrical engineering G1, candidates must have already passed the examination on Physics G1. To take Electrical engineering G2, candidates must have already passed the examination on Physics G1 and Electrical engineering G1, and must either have passed the examination on Physics G2 or be taking Physics G2 concurrently.

Candidates for the degree in another technological subject, normally those in the departments of fuel industries, applied mineral sciences or textile industries, may take Engineering IS (Introductory) or Engineering II S. The content of the course will be specially arranged in each case but will include all or part of the following:

*Introductory (Engineering I S)*

| | |
|---|---|
| Civil engineering | I SC |
| Mechanical engineering | I SM |
| Electrical engineering | I SE |
| Engineering drawing | I S drawing |

*Engineering II S*

| | |
|---|---|
| Theory and design of structures | II SC 1 |
| Strength of materials | II SM 1 |
| Heat engines | II SM 2 |
| Theory of machines | II SM 3 |
| Mechanics of fluids | II SM 4 |
| Electric power engineering | II SE 1 |
| Electronic engineering | II SE 2 |

This latter course involves up to six hours a week of laboratory work and, for students taking theory and design of structures, three hours a week drawing office work.

The courses listed above will cover the following subject matter:

## CIVIL ENGINEERING

*Engineering I*

CIVIL ENGINEERING IC

Construction and public works engineering: properties and uses of building materials; elementary principles of construction.

Theory of structures: bending moment and shear force diagrams for loadings on statically determinate beams; analysis of statically determinate plane frameworks; deflections of beams and frameworks; three-pinned arches and suspension bridges; elements of reinforced concrete design.

Surveying: basic principles and methods; chain surveying and traversing; levelling and contouring; tacheometry; setting out of civil engineering projects, including circular curves; basic land area and earthwork calculations.

Fluid mechanics: hydrostatics—manometers, total thrust and centre of pressure of an immersed lamina; Bernoulli's Equation—venturimeter, orifices, notches, weirs, Pitot tubes; momentum; laminar flow—Newton's law of viscosity, laminar flow in pipes, bearings and dashpots; dimensional analysis—Buckingham's $\pi$ theorem, dynamic similarity, modelling; turbulent flow—Darcy and Weisbach formulae, losses in pipes, nozzles, pipes in series and parallel. Boundary layers. Lift and drag on aerofoils. Flow around bluff and streamlined bodies.

FIELD SURVEYING

Practical field and drawing office work based on the content of the lectures outlined in I C above.

*Engineering II*

THEORY AND DESIGN OF STRUCTURES II C 1A

Bending moments and shearing forces for simple beams with moving loads; influence lines for simply supported beams; equivalent uniformly distributed loads; roof trusses and braced girders; design of riveted and welded connections under direct and eccentric loads; complete design of a plate web girder; design in detail of steel roof trusses; reinforced concrete load factor method.

STRUCTURAL ANALYSIS II C 1B

Criteria for statics and indeterminacy. Statically indeterminate frameworks and beams by moment area, three moment equations, strain energy, slope deflection, moment distribution. Space frames.

PUBLIC HEALTH ENGINEERING II C 2

Water supply: hydrology, sources of water, demand, impurities, treatment.
Sewerage: systems of sewerage, the design of sewers.
Treatment of water-borne wastes: chemistry of sewage, natural purification, biochemical reactions, methods of treatment.
Solid community wastes: treatment, recovery and utilisation.
Fundamental aspects of radioactive contamination of water and sewage, and of atmospheric pollution.

SURVEYING II C 3

Plane table, hydrographic and tunnel surveys. Surveying instruments and their adjustment. Setting out transition curves and vertical curves. Earthwork quantities. Triangulation surveys. Topographic base lines. Optical methods of surveying.

FIELD SURVEYING

Practical field and drawing office work based on the content of the lectures in surveying outlined in II C 3 above.

SOIL MECHANICS II C 4

Geological aspects of soil mechanics. Soil classification and identification. Mechanical properties of soils. Stresses in soil masses. Rankine's theory.

ARCHITECTURE AND PLANNING II C 5

Historical development of theory and practice in building and civil engineering; town and regional planning; architecture, landscape and civic design.

STRENGTH OF MATERIALS II C 6, 9

Elementary theory of elasticity; compound stresses and strains; Mohr's circles of stress and strain; theories of failure; electrical and mechanical strain gauges; stresses in cylinders under internal pressure; torsion of circular shafts; Bredt-Batho torsion; coil and laminated springs; combined torsion and bending; shear stresses in beams; shear centre of open sections; bending of asymmetric sections; elementary elastic instability; Euler load for struts and panels. Introduction to aircraft structures.

FLUID MECHANICS II C 7

Field theory: Laplace equation, continuity equation, the stream function, the velocity potential, sources, sink, doublet, semi-streamlined body, vortex, circulation, Kutta Joukowski equation, magnus effect, vorticity flow nets. Compressible flow: Bernoulli equation for compressible flow, venturimeter for gases, orifice, sonic velocity, de Laval nozzle. Channel flow: uniform flow, Chezy, Manning and Bazin formulae, economic sections, secondary flow. Water hammer: rigid pipe theory, elastic pipe theory for sudden valve closures only. Turbines and pumps: Euler triangles, characteristics, unit power, unit speed etc. Specific speed, cavitation.

HIGHWAY ENGINEERING II C 8

Administration: growth of the highway system, composition of the systems, manner of administration. Planning: factors affecting design, traffic engineering studies and their application, site surveys, highway location. Economics: benefit-cost ratio, earth quantities, highway equipment, sufficiency studies.

DRAWING AND DESIGN II C 11

Graphical determination of centroids and moments of inertia of sections; deflection and slope of beams from bending moment diagrams; beams of varying cross section. Complete designs and detail drawings of plate girders, roof trusses, and other steel or timber structures. Graphical methods for analysis of simple beams and girders subjected to moving loads.

Planning of individual buildings and development of more advanced detail drawings.

SUPPLEMENTARY COURSES

The material of the courses I SC and II SC 1 is similar to that of the respective parallel courses I C and II C 1. The 'S' courses however are arranged to finish at the end of the second year, whereas the others are continued as III C courses in the third year.

## *Engineering III*

THEORY AND DESIGN OF STRUCTURES III C 1

Influence lines for statically determinate triangulated structures; calculation of maximum forces in members. Suspension bridges; gravity dams.

Theory and design of reinforced concrete and statically determinate prestressed concrete structures; load factor methods. Statically indeterminate structures, including building frames by moment distribution; arches. Struts and laterally loaded columns. Plastic theories of structural analysis. Theory of model analysis. Elastic instability. Linear structural analysis including use of electronic computers.

PUBLIC HEALTH ENGINEERING III C 2

Water supply: treatment, distribution, pumping, various design calculations.

Sewerage: run-off calculations, design of sewerage system details.

Treatment of water-borne wastes: design of treatment plant units, the sludge problem.

Further aspects of radioactive contamination of sewage and water, and of atmospheric pollution.

Financial considerations.

SURVEYING III C 3

Effects of errors in instruments. Triangulation surveys. Base line measurement. Precise and trigonometrical levelling. Adjustment of errors in surveying and levelling. Geodetic and map projection computations. Electronic methods of surveying. Tellurometer and Geodimeter. Geophysical methods of site investigation. Radial line methods. Parallax bar heightening. The Multiplex stereoplotter. Route surveys.

FIELD SURVEYING

Practical field and drawing office work based on the content of the lectures in surveying and photogrammetry outlined in III C 3 above.

SOIL MECHANICS III C 4

Soil properties. Soils survey procedure. Testing of foundation soils. Settlement and consolidation. Earth pressure theories. Theory of bearing capacity. Design of foundations and retaining walls. Cuttings and embankments. Theory and practice of piling.

ARCHITECTURE AND PLANNING III C 5

The modern movement in architecture, town and regional planning; survey of history, principles and developing techniques.

STRESS ANALYSIS III C 6

Mathematical theory of elasticity; stress functions in Cartesian and polar co-ordinates; numerical methods. The analysis of plates under transverse and in-plane forces. St. Venant theory of torsion.

Experimental stress analysis including the theory and practice of photo-elasticity; brittle lacquers; the measurement of dynamic stresses. Analogies for solution of stress problems.

HYDROLOGY AND WATER ENGINEERING III C 7

Hydrology: precipitation, evapo-transpiration, run-off and subterranean water; analysis of hydrographs; river characteristics; flood-routing and control; waves and tides; beach formation and control; hydraulic models.

Water engineering: Channel flow—non-uniform flow in channels. Specific energy. Water hammer; rigid pipe theory; elastic theory. Vortex motion. Free and forced vortices. Spiral vortex. Rankine vortex. Surge tanks: differential equations for sudden acceptance and rejection of load. Surge waves in channels.

HIGHWAY ENGINEERING III C 8

Pavement design: soil aggregate; bituminous and concrete roads. Maintenance problems. Drainage: sub-surface and surface drainage problems. Geometric design: application of planning data, sight distance factors, transition curves, superelevation, widening of curves. Traffic control measures: traffic signals, pavement markings, layout of intersections.

AIRCRAFT STRUCTURES III C 9

Principles in the design and stress-analysis of stressed-skin aircraft structures.

Structural requirements: aerodynamic and inertia loads, gust and manœuvre loads; flight and gust envelopes, air load distribution.

Shear distribution in, and shear centre and deflections of thin-walled open, closed, and multi-cell tubes; Neuber tubes; stresses due to restrained warping of tubes; taper effects. Diffusion of load and shear-lag; effect of cut-outs.

Materials and methods of aircraft construction. Distribution methods of shear flow analysis. Matrix force and displacement methods of aircraft structural analysis.

THEORY AND DESIGN OF SHELLS III C 10

Membrane theory of cylindrical shells, domes and hyperbolic parabaloids. Beam analogy. Elementary theory of polygonal shells.

DESIGN AND DRAWING III C 11

Design of bridge decks, building frames, masts and towers, and other types of steel structures, of riveted and welded construction. Suspension bridges. Design of reinforced concrete and pre-stressed concrete structures. Retaining walls, foundations, dams, embankments, etc. Preparation of working drawings, bills of quantities, etc.

[Candidates for the degree in civil engineering in their final year must prepare designs and drawings in a structural design and drawing examination of two days' duration which will be held early in the last term of the session.]

### *Engineering IV*

This course is for students who wish to read for Honours according to scheme "A". It is essentially a course of advanced study, and work of a specialised character will be undertaken in each of the various subjects. In general, some aspects of the work covered in the corresponding subjects of Engineering III will be developed.

## MECHANICAL ENGINEERING

### *Engineering I*

STRENGTH OF MATERIALS IM 1

Transmission of force through a body, stress, displacement, strain, elastic constants; testing and properties of materials; thin vessels under internal pressure; torsion of a circular shaft; bending moment and shear force; stresses and displacements in beams.

ENGINEERING THERMODYNAMICS IM 2

Properties of fluids; general equation for fluid flow; theory of heat; the first and second laws of thermodynamics; criterion of reversibility; heat engines; refrigerators and heat pumps; principles of heat transfer.

THEORY OF MACHINES IM 3

Kinematics; kinematic chains; degrees of freedom; instantaneous centres; equilibrium of machines; mechanisms; simple velocity and acceleration diagrams; gear tooth profiles; velocity ratio of gear trains.

FLUID MECHANICS IM 4

Hydrostatics; Bernoulli's equation and applications; linear and angular momentum of fluids; elementary theory of hydrodynamic machines; introduction to ideal fluid theory and to boundary layers.

ENGINEERING MEASUREMENTS IM 5

Principles of fine measurement; interference methods; measuring machines and comparators; limits and fits; screw thread measurements; measurement of angles, straightness, flatness and squareness.

DRAWING AND DESIGN IM 6

Preparation, purpose and use of engineering drawings. Orthographic and axonometric projection, sketching. Drawing office practice. Use of simple engineering components and relevant standards. Basic machining processes. Elementary design examples.

GRAPHICAL AND NUMERICAL ANALYSIS IM 7

Slide rule; errors and smoothing; finite differences; numerical and graphical differentiation and integration; joints, lines, planes and solids in space; kinematics; velocity diagrams; work principle; 1st and 2nd moments of area.

## *Engineering II*

STRENGTH OF MATERIALS IIM 1

Compound stresses; principal stresses; theories of elastic breakdown. Asymmetric beams and shear centre. Strain energy; virtual work; complementary energy; general energy theorems.

ENGINEERING THERMODYNAMICS IIM 2

General thermodynamics; corollaries of the second law; entropy function; simple gas turbine theory; theory of orifices and nozzles; properties of real fluids; steam cycles; refrigeration; de Laval steam turbine; elements of heat transfer.

THEORY OF MACHINES IIM 3

Geometry of gear teeth. Simple acceleration diagrams; inertia forces in mechanism. Feedback ideas in machines; governing. Vibration with one degree of freedom.

FLUID MECHANICS IIM 4

Properties of fluids; viscosity; Couette and Poiseuille flow between flat plates; introduction to hydrodynamic lubrication; dimensional analysis; dynamical similarity and principles of model testing; flow in pipes and open channels; positive displacement pumps and motors; ideal fluid theory and introduction to aerofoil theory.

PRODUCTION ENGINEERING IIM 5

Functions and scope of production engineering. Metrology; system of limits and fits, gauging and measurement. Machine tools, machining processes, feeds and speeds, tool dynamometers, forces and power in machining, machining times, alignment tests of machine tools, surface finish, use of interferometers for fine measurement.

DRAWING AND DESIGN IIM 6

The design process; consideration of duty specifications, forms of construction, materials, cost, aesthetics, use of proprietary components, limits. Bearings, gears. General and detail design to specification. Preparation of working drawings.

GRAPHICAL AND NUMERICAL ANALYSIS IIM 7
Numerical solution of differential equations; acceleration diagrams; statics; dynamics; mechanisms; vibrations; ideal fluid theory.

NUCLEAR ENGINEERING IIM 8
Basic physics of the nucleus; nuclear reactions; engineering applications of nuclear reactions; nuclear power.

SUPPLEMENTARY COURSES
The material of courses ISM, IISM 1, IISM 2, IISM 3, IISM 4, is similar to that of the respective parallel courses IM, IIM 1, IIM 2, IIM 3, IIM 4. The 'S' courses however are arranged to finish at the end of the second year, whereas the others are continued as IIIM courses in the third year.

## *Engineering III*

STRENGTH OF MATERIALS IIIM 1
Advanced theory of bending; plates; elastic stability; rotational and thermal stresses with axial symmetry; torsion; real materials; experimental stress analysis; general engineering properties of materials; nature of deformation; dislocations; yield strength; hardening; temperature and time effects.

ENGINEERING THERMODYNAMICS IIIM 2
General thermodynamic theory; heat transfer related to fluid flow; flow in ducts and nozzles; multi-stage steam turbine theory; gas turbine theory; internal combustion engine theory.

ENGINEERING DYNAMICS III M 3
Nature of contact between machine elements. Dry, fluid film and boundary friction. Rolling contact bearings. Bearing selection. Bevel, worm and other gears. More difficult acceleration diagrams. Forced vibration with two and more degrees of freedom. Shaft whirl. Gyroscopes. Stability of automatic control systems.

FLUID MECHANICS IIIM 4
Basic equations, continuity, state, motion, and energy; Reynold's equation for fluid film lubrication; hydrodynamic and hydrostatic bearings. Compressible flow theory including channel flow; shock waves and supersonic thin aerofoil theory; low speed aerofoil theory with related topics from ideal fluid theory. Boundary layer theory; definitions of boundary layer thickness; boundary layer equations of motion; Blasius solution; momentum equation: skin friction drag; transition; turbulent boundary layers; effect of surface roughness; separation and form drag. Axial flow machines.

ENGINEERING PRODUCTION AND ADMINISTRATION IIIM 5
Engineering production processes; machineability; theory of metal cutting; theory of metal working. Economics of machinery; principles of industrial administration; factory layout; materials handling; stock control; production control; engineering economic analysis; statistical methods; work study; incentives; social aspects of management.

DRAWING AND DESIGN III M 6

Design of an assembly to meet a specific duty. The solution to this problem together with development notes and drawings forms part of the final degree examination.

GRAPHICAL AND NUMERICAL ANALYSIS IIIM 7

Further numerical analysis. Graphical and numerical solution of problems from Strength of materials, Thermodynamics, Dynamics and Fluid mechanics.

Engineering II R and III R courses will cover selected topics from the corresponding Engineering II and III courses.

## ELECTRICAL ENGINEERING

### *Engineering I*

ELECTRICAL ENGINEERING I E

Loop and node analysis of d.c. circuits; circuit theorems. Ideal and practical circuit elements. The analysis of sinusoidal circuits by means of phasors and complex algebra. Resonant circuits.

The M.K.S. unit system. The electrostatic field; applications of electrostatics in engineering. Plotting and calculation of fields. The magnetic field; some electromagnetic laws; the magnetic circuit. Energy relations in electric and magnetic fields.

Principles of electromechanical energy conversion on the basis of field energy. Magnetically coupled circuits: the transformer. Incremental-motion devices: measuring instruments. Gross-motion devices: introduction to the important types of rotating machine. Three-phase systems.

Circuits employing ideal diodes; half- and full-wave rectification; filters. Physical diodes; vacuum diode, gas-filled diode, pn junction diode. Piecewise-linear models for diodes. Ideal amplifiers; triode valve; static and dynamic characteristics; loadline, distortion. Thyristor: characteristics and applications.

### *Engineering II*

ELECTROMECHANICAL DEVICES AND SYSTEMS II E 1

Mmf, torque and voltage in rotating machines. General theory of idealised d.c. machines. Analysis of simple control systems employing d.c. machines. Commutation. Cross-field machines. Introduction to general theory of a.c. machines: performance of synchronous and asynchronous machines. Two-phase control-system machines.

ELECTRIC CIRCUIT THEORY II E 2

The elements of circuit analysis under transient conditions by means of the Laplace transform. Complex frequencies; time and frequency domains; driving-point and transfer impedances; two-port parameters and network stability. Elementary theory of transmission lines.

ELECTROMAGNETISM II E 3

Vector relations. Equations of electrostatic field in vector form; calculations in electrostatics. Force on moving charge; magnetic circuit and Biot-Savart laws. Iron in the magnetic field. Electromagnetic induction. Relationship between electrostatic and magnetic quantities in Maxwell's equations. Flux penetration; the wave equation.

POWER SYSTEMS II E 4

3-phase transformers; parallel operation, harmonics. Per-unit quantities. Calculation of symmetrical 3-phase short circuits. Mercury-arc rectifiers; overlap, voltage control, inverter operation. Short transmission-lines. Medium transmission-lines, nominal T and $\pi$ representation.

FUNDAMENTALS OF ELECTRON DEVICES II E 5

Electron energy band theory and application. Electron trajectories and electron beams. Molecular approach to the study of dielectrics. Elementary theory of the physical processes in semiconductors, with special reference to transistors.

ELECTRONIC ENGINEERING II E 6

The thermionic triode and transistor as amplifying elements; piecewise-linear and incremental-linear models; multigrid thermionic valves and models; single-stage and cascaded amplifiers; operational amplifiers. Wave generation and shaping; binary logic circuits; regenerative switching.

ELECTRICAL MEASUREMENTS II E 9

Standards. Indicators and meters; d.c./a.c. potentiometers and bridges; magnetic theory and measurements. Electronic instruments; audio and radio frequency measurements. Estimation of errors.

SUPPLEMENTARY COURSES

The material of courses I SE, II SE 1, II SE 2 is similar to that of the respective parallel courses I E, II E 1, II E 6 though more restricted in scope. The 'S' courses however are arranged as either one-year or two-year courses, whereas the others are continued as III E courses in the third year.

One division of course I SE is designed to meet the special needs of students of chemical engineering. An additional course (II SE3) is designed to meet the special needs of students of metallurgy who have already taken a I SE course.

## *Engineering III*

ELECTRIC MACHINES III E 1

Advanced topics in the generalised theory of machines; salient pole, a.c. commutator and single-phase machines. Aspects of transient performance; short circuits, oscillations and starting phenomena. Important features of realistic machines; saturation, eddy-currents and harmonics. Analysis of air-gap distribution.

ELECTRIC CIRCUIT THEORY III E 2

Steady-state theory of transmission-lines. Application of matrices to circuit analysis. General network theorems, including theorems dealing with transient response. Theory of filters.

ELECTROMAGNETISM III 3

Vector potential and its use in field calculations. Energy storage and energy flow. Eddy currents and skin effect. Numerical estimation of inductance. Relativity in the electromagnetic field; phenomena associated with moving bodies.

POWER SYSTEMS III E 4

Theory of power transmission lines. Power system analysis by symmetrical components; fault calculations. Stability. Circuit interruption. Power system protection. Surges on lines.

FUNDAMENTALS OF ELECTRON DEVICES III E 5

Further theory of the motion of charged particles in electromagnetic fields, with applications. The electrical properties of solids, liquids and gases in relation to their physical constitution and to their engineering applications.

ELECTRONIC ENGINEERING III E 6

Introduction to modulation systems; frequency changing and demodulation. Wide-band tuned amplifiers. Noise in electronic circuits.

ELECTROMAGNETIC WAVE PROPAGATION III E 7

Waves in homogeneous dielectric and conducting media. Polarization. Reflection and refraction of waves on dielectric and conducting surfaces. Group and phase velocities. TE and TM modes. Rectangular waveguides; power flow, energy storage, attenuation constant.

CONTROL ENGINEERING III E 8

Application of feedback theory to closed-loop control systems. Steady-state and transient response. Stability criteria, including the root-locus approach. Frequency response using Nyquist and Bode plots. Performance criteria; methods of improving system performance. Analogue computing and simulation techniques.

### *Engineering IV*

This course is for students who intend to read for Honours. It is essentially a course of advanced study, and work of a specialised character will be undertaken in each of the various subjects. In general, some aspect of the work covered in the corresponding subjects of Engineering III will be developed.

## APPLIED MINERAL SCIENCES

(On 1st October 1963 the Department joined the Houldsworth School of Applied Science. Schemes of study in applied mineral science appear under the Houldsworth School, page 573; for schemes of study in mining see page 563.)

MINERAL TECHNOLOGY 1

First year; 2 hours a week.

An introduction to the occurrence, exploration, exploitation and treatment, and utilisation of minerals.

MINERAL TECHNOLOGY 2 (FUEL INTRODUCTORY AND METALLURGY M)

Third year; 2 hours a week.

An introduction to the origin, properties and assessment of primary fuels, to the manufacture and purification of secondary fuels and to the industrial and domestic use of solid, liquid and gaseous fuels. A general review of extraction metallurgy, the properties of metals and alloys, the applications of metals and alloys in mining engineering.

MINERAL TECHNOLOGY 2(a)

Second year; 1 hour a week.

A survey of methods and equipment used for the control, transportation and storage of materials.

MINERAL TECHNOLOGY 3

Third year; 2 hours a week.

The working of mineral deposits; the effect of size, shape, location, nature upon exploitation. Environmental conditions in mines.

MINERAL SCIENCES 1

Third year; 3 hours a week.

The general principles of mineral processing; the evaluation of plant performance; chemical treatment processes.

MINERAL SCIENCES 2

Fourth year; 9 hours a week.

Process instrumentation; metallurgical thermochemistry; extraction metallurgical processes; fluid-particle dynamics; comminution; sizing; concentration processes; flotation chemistry; design of flow sheets.

MINERAL ECONOMICS

Third or 4th year; 2 hours a week.

Mineral reserves; sampling; mine examination; markets; valuation; capital requirements. Economic factors influencing the cost of metals and metallurgical operations.

DESIGN OF INDUSTRIAL PLANTS

Fourth year; 1 hour a week.

The design of a mineral processing plant, including ore testing and planning.

SURVEYING

Second year; 2 hours a week.

Instruments; methods and standards of accuracy of topographical surveys; astronomical surveying; computation; maps and plans.

MINING TECHNOLOGY 1

Third year; 4 hours a week.

The design of machinery for the exploitation of minerals; mineral dressing methods and standards of accuracy for underground surveying; correlation of surface and underground surveyors; computation and plotting.

MINING TECHNOLOGY 2

Third or 4th year; 6 hours a week.

Methods of working stratified and unstratified mineral deposits; mine ventilation, safety and rescue; transportation in mines; organisation and management; environmental conditions in mines.

MINING TECHNOLOGY 3

Fourth year; 4 hours a week.

Geophysical prospecting and geochemical prospecting; well logging techniques. Development of oilfields including primary and secondary recovery; estimation of reserves. Mechanical properties of rocks; theories of rock failure; stresses around openings and in linings. Coal face and roadway supports; the mechanics of mining subsidence. Electrical, compressed air and hydraulic power in mines.

In addition to the courses outlined above, courses in first aid are provided for those students who wish to take the Mining schemes of study. Students of Mineral sciences may attend these courses if they wish. A First Aid certificate, recognised by the Mining Qualifications Board of the Ministry of Power is issued to students who successfully follow these courses.

*For the postgraduate diploma in mineral dressing and coal preparation*

MINERAL DRESSING 1

Postgraduate; 1 hour a week.

Comminution: Advanced theory and practice.

Flotation: Advanced theory and practice.

MINERAL DRESSING 2

Postgraduate; 1 hour a week.

Efficiency of washing operations and plant performance. Miscellaneous processes of concentration.

MINERAL DRESSING 3

Postgraduate; 1 hour a week.

Laboratory sizing; principles of screening and filtration.

MINERAL DRESSING 4

Postgraduate; 1 hour a week.

Motion of solids in fluids; classification; concentration.

MINERAL DRESSING 5

Postgraduate; 1 hour a week.

Dense media separation: cyclones; thickening.

MINERAL DRESSING 6

Postgraduate; 3 hours alternate weeks.

Plant layout and design.

Examination: 3 papers covering Mineral dressing 1, 2, 3, 4 and 5.

## FUEL SCIENCE, FUEL ENGINEERING, CERAMICS, CHEMICAL ENGINEERING AND METALLURGY

*Courses given in the department of fuel science and gas engineering*

FUEL INTRODUCTORY

First year; 1 hour a week.

An introduction to the origin, properties and assessment of primary fuels, to the manufacture and purification of secondary fuels and to the industrial and domestic use of solid, liquid and gaseous fuels.

FUEL AND NON-METALLIC MATERIALS FOR MECHANICAL ENGINEERS

Second or 3rd year; each part 1 hour a week for 1 term.

Part I. *Fuel.* The principles of the selection and utilisation of fuels for industrial combustion.

Part II. *Non-metallic materials.* Elementary science of: ceramics for mechanical and nuclear engineering; electrical insulator ceramics, high-permittivity, piezoelectric and magnetic ceramics, and semi-conductors; glasses; adhesives; the main families of thermosoftening and thermosetting plastics.

FUEL T1 GENERAL FUEL SCIENCE AND TECHNOLOGY

First year; 2 lectures and 3 hours laboratory a week.

A general course reviewing the origin, properties, distribution, sampling, testing, preparation and processing of primary fuels and the utilisation of primary and secondary solid, liquid and gaseous fuels.

FUEL T2 PETROLEUM TECHNOLOGY

Second and third years; 1 lecture and 3 hours laboratory a week.

The science and technology of the production, processing and utilisation of petroleum and its products.

FUEL T3 INDUSTRIAL COMBUSTION TECHNOLOGY

Third year; 1 lecture and 6 hours laboratory a week.

The principles of the combustion of solid, liquid and gaseous fuels and their application to steam generation and furnace heating. The principles of steam utilisation.

FUEL T4 FUEL GAS AND COKE

Third year; 1 lecture a week and 3 hours laboratory.

The science and technology of carbonisation, gasification and gas treatment.

FUEL H1 SCIENTIFIC METHOD AND TECHNIQUE

Third year; 1 lecture and 6 hours laboratory a week (the laboratory work also covers courses H2—H4).

A tutorial course on the methods and techniques used in the scientific study of fuels and their utilisation.

FUEL H2 PETROLEUM AND RELATED MATERIALS

Third year; 1 lecture a week. 4th year; 2 lectures a week.

The science and applied science of the petroleum producing and processing industry, and of major aspects of petroleum utilisation.

FUEL H3 COALS AND ASSOCIATED MATERIALS, COKES, CHARS, AND AMORPHOUS CARBONS

Third year; 1 lecture a week. 4th year; 2 lectures a week.

The science and applied science of coals, coal derivatives and related carbonaceous solids.

FUEL H4 COMBUSTION

Third year; 1 lecture a week. Fourth year; 2 lectures a week.

The fundamental principles of the combustion of solid, liquid and gaseous fuels, and their application.

FUEL H5 PHYSICAL CHEMISTRY OF FUEL PROCESSES

Fourth year; 1 lecture a week.

The chemical kinetics and thermodynamics of reactions involved in the manufacture and use of fuels.

FUEL H6 RESEARCH AND DEVELOPMENT TRENDS

Fourth year; 1 lecture a week.

A series of reviews and discussions of the fundamental aspects of major developments in the fields of fuel science and technology.

FUEL H7 HIGH TEMPERATURE HEAT TRANSFER

Fourth year; 1 lecture and 3 hours laboratory a week.

An advanced course in high temperature heat transfer.

FUEL H8 FUEL PROCESSING

Fourth year; 1 lecture and 3 hours laboratory a week.

An advanced course on the basic principles and current engineering design and the economics of the manufacture, treatment and distribution of secondary fuels.

FUEL H9 POWER AND STEAM

Fourth year; 1 lecture and 3 hours laboratory a week.

Further considerations of the engineering and thermodynamics of power and steam generation and utilisation.

*Courses given by the department of chemical engineering*

PROCESS INSTRUMENTATION 1

Second or 3rd year; 1 hour a week.

Theoretical principles and design of instruments for the measurement of process operating variables; temperature, pressure, flow, gas composition, etc.

PROCESS INSTRUMENTATION 2

Third or 4th year; 1 hour a week and 1 more lecture a week in the first or second term.

Theoretical principles and design of instruments for the automatic control of process operations.

CHEMICAL ENGINEERING GENERAL A

Second year; 1 hour a week.

An elementary course for students from other departments in chemical process principles. An introduction to chemical engineering with illustrations drawn from many branches of the chemical industry.

CHEMICAL ENGINEERING GENERAL B

Second year; 1 hour a week.

An introductory survey for students from other departments covering all the main unit operations of chemical engineering, indicating the underlying theory and the forms of plant appropriate to each.

HEAT TRANSFER

Second or 3rd year; 1 hour a week.

A study of heat transfer and heat transfer equipment.

ELEMENTARY UNIT OPERATIONS

Second or 3rd year; 1 hour a week.

A study of unit operations of chemical engineering.

FLUID MECHANICS

Second or 3rd year; 1 hour a week.

Basic continuum and fluid mechanics. Flow through pipes and pipe fittings. Flow meters and pumps.

PROCESS INSTRUMENTATION 3

Second or 3rd year; 1 hour a week.

An introduction to the measurement and automatic control of process variables.

CHEMICAL ENGINEERING HONOURS STUDIES

Third or 4th year; 9 hours a week of lectures and 12 hours a week on laboratory work and a design project.

Advanced heat transfer, advanced fluid mechanics, diffusional process, cascade processes, particle dynamics, chemical reactor design, economics and management. Laboratory work on semi-technical scale equipment. A design project, being a tutored calculation and drawing course involving the design of industrial chemical plant.

CHEMICAL ENGINEERING ORDINARY STUDIES

Third year; 3 hours a week of lectures and 12 hours a week on laboratory work and a design project.

Diffusional processes, particle dynamics, economics and management. Laboratory work on semi-technical scale equipment. A design project, being a tutored calculation and drawing course involving the design of industrial chemical plant.

*Courses given in the ceramics section*

CERAMICS INTRODUCTORY

First, 2nd or 3rd year; 1 hour a week.

Part 1: Introduction to non-metallic materials in general: elementary science and technology of ceramics, glasses, adhesives and plastics.

Part 2: More detailed treatment of materials (mainly refractories) of special interest to metallurgists and fuel scientists.

Examination: 1 paper of 1½ hours.

CERAMICS 1

Second year; 2 hours a week.

The history and economics of the ceramic industry; distribution and nature of raw materials; principles of reactions and processes involved in the production of the main types of ceramic materials.

Examination: 1 paper of 2 hours.

CERAMICS 1B (NON-METALLIC MATERIALS OF CONSTRUCTION FOR CHEMICAL ENGINEERING)

Second year; 1 hour a week.

Part 1: Introduction to non-metallic materials in general: elementary science and technology of ceramics, glasses, adhesives and plastics.

Part 2: More detailed treatment of materials of special interest to chemical engineers (refractories, fused silica, glass, carbon, timber, etc.).

Examination: 1 paper of 1½ hours.

CERAMICS 4 (BASIC CHEMISTRY AND PHYSICS OF CERAMICS)

Third year; 2 hours a week.

The fundamental physical and chemical processes related to the science and technology of ceramics and refractories. Theory of particle packing, colloidal properties of clay and ceramic oxides, deflocculation, cation exchange reactions, flow properties of clay-water suspensions, plasticity, dry strength, clay organic complexes, theory of drying, phase equilibria, interpretation of phase diagrams, the mechanism and kinetics of solid-state diffusion, phase transformations, sintering, recrystallization and grain-growth of ceramics, reactions of ceramics with gases, liquids and solids.

Examination: 1 paper of 3 hours.

CERAMICS 5 (MINERALOGY AND CRYSTAL STRUCTURE)

Third year; 1 hour a week.

The structures of silicates and related minerals of interest in ceramics.

Examination: 1 paper of 1½ hours.

CERAMICS 7 (PROCESS CERAMICS)

Third year; 1 hour a week.

The technology and scientific principles of ceramic processes, including the stages of manufacture, properties of the products, behaviour in service and analysis of common defects. The theory and practice of compounding and applying glazes. The design and operation of the principal types of kiln.

Examination: 1 paper of 2 hours.

CERAMICS 10 (PHYSICS OF NON-METALLIC SOLIDS)
Fourth year; 1 hour a week.
Theory of the mechanical, thermal, optical, electrical and magnetic properties of non-metallic solids, including oxides, halides, carbides and certain elements.

CERAMICS 11 (CERAMICS LABORATORY TECHNIQUES)
Fourth year; 1 hour a week.
Techniques of classical and rapid silicate analysis; instrumental methods of analysis. Measurement of particle size distribution from sub-micron to sieve sizes. Rheological measurements on solid-liquid systems, electrochemical methods. Measurement of drying rates and size changes. Measurement of bulk properties, permeability, thermal properties, mechanical properties, electrical properties. Microscopical methods and phase equilibrium techniques. Thermal analysis. Use of X-ray diffraction, fluorescence and electron probe analysis and the electron microscope.

CERAMICS 12 (POTTERY AND STONEWARE)
Fourth year; 1 hour a week.
A brief history of English pottery, with special reference to technical developments.
The raw materials used in the pottery industry; their occurrence, properties and uses. The present basic knowledge of forming and drying, the mineralogical and physical changes on firing, the physical and chemical properties of the products and the defects and problems of manufacture and service. The science of glazes and their application. Methods of decoration and the chemical reactions involved.

CERAMICS 13 (HEAVY CLAYWARE)
Fourth year; 1 hour a week.
A parallel course to Ceramics 12 dealing with the science and technology of heavy clayware.

CERAMICS 14 (REFRACTORY MATERIALS)
Fourth year; 1 hour a week.
General properties and methods of testing; manufacture and properties of silica, aluminosilicate and basic refractories, with particular reference to the physics and chemistry of the reactions and processes taking place; the less common refractories, castable refractories, insulating refractories and super-refractories.

CERAMICS 15 (ELECTRICAL AND MAGNETIC CERAMICS)
Fourth year; 1 hour a week.
A detailed study of the ceramics of present and potential importance for electrical and magnetic applications. Insulator, high-permittivity, piezoelectric, semi-conductor (including rectifier and transistor), photoelectric, thermoelectric, soft and hard magnetic materials.

CERAMICS 16 (CERAMICS FOR MECHANICAL AND NUCLEAR ENGINEERING)
Fourth year; 1 hour a week.
Oxides, carbides, carbon, silicides, borides, nitrides, cermets, ceramic coatings, etc., for rocket, nuclear reactor and other applications.

CERAMICS 17 (GLASS SCIENCE)
Fourth year; 1 hour a week.
Structure, physical and chemical properties of glass.

*Courses given in the department of metallurgy*

METALLURGY FOR ENGINEERS
1 lecture a week.
A general review of metallurgy principally from the viewpoint of engineering applications. Given in separate classes for civil and mechanical engineers and members of the Houldsworth School except students of metallurgy and chemical engineering.
Examination: 1 paper of 1½ hours.

METALLURGY M
1 lecture a week (for mining students).
A general review of extraction metallurgy, the properties of metals and alloys, the applications of metals and alloys in mining engineering.
Examination: 1 paper of 1½ hours.

METALLURGY CE
2 lectures a week (for students of chemical engineering).
The structure and mechanical properties of metals as influenced by temperature, metal fabrication processes, corrosion.

INTRODUCTORY PHYSICAL METALLURGY
3 lectures a week. An introductory course for students of physics and chemistry.
General metallurgy; physical metallurgy; commercial alloys.
Laboratory class; 3 hours a week for 2 terms.
Examination: 1 paper of 3 hours.

METALLURGY 3E
3 lectures a week (for students of civil engineering).
Physical metallurgy; commercial alloys; metal forming.
Laboratory class; 3 hours a week for 2 terms.
Examination: 1 paper of 3 hours.

GENERAL METALLURGY
1 lecture a week throughout the session and 3 hours' laboratory work a week for 1 term (for students of metallurgy, physics and chemistry).
Equilibrium diagrams, the microstructure of metals and alloys, diffusion, founding, forming, corrosion.

EXTRACTION METALLURGY
1 lecture a week.
Mineral formation and unit processes in mineral dressing; metal extraction processes including pyrometallurgical, electrochemical and distillation techniques. Introduction to the processes of iron and steel manufacture.

PHYSICAL METALLURGY
1 lecture a week (for students of metallurgy, physics, chemistry and civil engineering).
Elementary discussion of crystal structures including imperfections, physical and mechanical properties of metals and alloys, phase transformations.

COMMERCIAL ALLOYS

1 lecture a week (for students of metallurgy, physics, chemistry and civil engineering).

The bulk properties of metallic elements with reference to their position in the periodic table. Mechanical, chemical and electrical properties of commercial alloys.

CORROSION

1 lecture a week (Honours and Ordinary degree students).

Oxidation of metals, electrolytic corrosion, methods of protection.

CRYSTALLOGRAPHY

1 lecture and 3 hours' laboratory work a week (Honours degree students only).

Crystal symmetry, projections, lattice transformations. X-ray and electron diffraction and their application to metallurgical structures.

IRON AND STEEL PRODUCTION

2 lectures a week for 1½ terms and 1 lecture a week for 1½ terms (Honours and Ordinary degree students).

Structure of the iron and steel industry; review of established iron and steel making processes and their interdependence. Chemistry of iron and steel making. Recent developments in steel making. Vacuum treatment of steel. Possible future developments in the iron and steel industry.

METALLURGICAL THERMOCHEMISTRY

2 lectures a week for 1½ terms and 1 lecture a week for 1½ terms (Honours degree students only).

Application of thermodynamic principles to homogeneous and heterogeneous equilibria between gases, liquids and solids with particular reference to metallurgical extraction processes.

METALLOGRAPHY

3 hours, laboratory work a week (Honours and Ordinary degree students).

The metallography, transformations and heat treatment of ferrous alloys. The structures of typical welds. The metallography of copper, aluminium and magnesium alloys and of typical bearing alloys, photomicrography, macro-etching and metallographic investigation.

TOPICS IN PHYSICS

1 lecture a week (Honours degree students only).

Elements of quantum mechanics. Interaction of photons, neutrons and electrons with solids.

ALLOY THERMODYNAMICS

1 lecture a week (Honours degree students only).

Entropy and disorder, free energy, vacancies in metals, order-disorder transformations. Equilibrium diagrams, activity and fugacity coefficients of regular solutions. Experimental methods for determining the thermodynamic functions of solutions.

CRYSTAL PHYSICS
1 lecture a week (Honours degree students only).
Introduction to anisotropic physical properties of crystals and their representation by second and fourth rank tensors. The application of tensors to conductivity, diffusion and elasticity of crystals. Theories of martensitic transformations. Vector treatment of diffraction.

ELECTRONS IN SOLIDS
1 lecture a week (Honours degree students only).
Motion of electrons in a periodic potential. Metals, insulators and semiconductors. Cohesion of metals. Brillouin zones. Determination of the Fermi surface.

FORMING
1 lecture a week throughout the session and 3 hours' laboratory work a week for 1½ terms (Honours and Ordinary degree students).
Yield criteria, ideally plastic materials, forging, extrusion, wire drawing and rolling of metals.

FOUNDING
1 lecture and 3 hours' laboratory work a week (Honours and Ordinary degree students).
The solidification of metals, segregation in alloys. The cast form and the design of castings, techniques for the manufacture of castings, moulding materials, the detection, prevention and significance of casting defects; special foundry techniques.

INDUSTRIAL PRACTICE
1 lecture a week for 1½ terms (Honours and Ordinary degree students).
Survey of industrial practices with particular reference to the functions of the metallurgical graduate.

JOINING
1 lecture a week for 1½ terms (Honours and Ordinary degree students).
Soldering, brazing and welding of metals. Metallurgical problems of riveting and bolting. The use of adhesives.

MECHANICAL PROPERTIES
1 lecture a week throughout the session and 3 hours' laboratory work a week for 1½ terms.
Dislocation theory of plastic deformation and its application to work hardening, age hardening, brittle and ductile fracture, creep and fatigue in metals and alloys. Internal friction.

POINT IMPERFECTIONS
1 hour a week (Honours degree students only).
Diffusion and random atom movements. Diffusion ellipsoid. Damping and anelasticity due to interstitial solutes. Vacancies. Irradiation damage. Impurity atoms in metals. Zone-refining. Fabrication of semi-conductor devices.

POLYMERS
1 lecture a week (Honours degree students only).
Nature and types of polymers. Condensation and addition polymerisations. Polymer solutions. Properties of macromolecules. Industrial applications: plastics, resins, rubbers. Future developments.

STRUCTURE OF ALLOYS
1 lecture a week (Honours and Ordinary degree students).
Phase transformations in the solid state, special features of iron carbon alloys. Recovery, polygonisation and recrystallisation. Structure of grain boundaries. Metallography of complex alloys.

EXPERIMENTAL METHODS
3 hours' laboratory work a week (Honours degree students only).
A student repeats work from a current paper or attempts to solve a simple problem.

ELECTRICAL TECHNOLOGY
1 lecture a week (Honours and Ordinary degree students).
Single and three-phase alternating currents. D.c. and a.c. motors. Principles of electronic engineering.

## TEXTILE INDUSTRIES

TEXTILES I
Comprises: Raw materials 1T, Yarn manufacture 1T, Fabric manufacture 1T, Textile chemistry 1C, Textile physics 1P and Textile engineering 1E.

TEXTILES IT
Comprises: Raw materials 1A, Yarn manufacture 1T, Fabric manufacture 1T and Textile chemistry 1A.

FIBRE SCIENCE I
Comprises: Textile chemistry 2C(i), 2C(ii) and 2C(iii) and Textile physics 2P(i), 2P(ii), 2P(iii).

FIBRE SCIENCE II
Comprises: Textile chemistry 3C(i), 3C(ii) and 3C(iii) and Textile physics 3P.

GENERAL TEXTILE TECHNOLOGY
Tuesday, 9 to 10.
Preliminary survey of the structure and properties of textile fibres, followed by an outline of their manipulation in scouring, carding, spinning, weaving, knitting and finishing. Quality control and textile testing.

RAW MATERIALS 1T
Thursday 11 to 12.
*General.* Survey of the world's sources of textile fibres. General review of the physical properties of natural and man-made fibres, including dimensions, density, moisture relations, mechanical and electrical properties.
*Wool.* Structure and growth of wool fibres; wool types and qualities, wool sorting and wool tops, impurities; British sheepfarming, breeds and wools;

wool production throughout the world, with special reference to Australia, New Zealand, South Africa and South America; skin wools, carpet wools, wool wastes—mungo and shoddy; shearing, classing and marketing; animal hairs—mohair, cashmere, camel hair, alpaca, vicuna and minor hairs.

*Other natural fibres.* The structure, growth, geographical distribution, properties and uses of American, Egyptian, Sea Island, Indian, South American and African cottons; cotton ginning, grading and marketing. The cultivation, grading, properties and uses of flax, jute and other bast and leaf fibres. The production, grading, properties and uses of silk. The production, properties and uses of asbestos.

*Man-made fibres.* The properties and uses of viscose, cellulose acetate and protein rayons, polyamides, polyesters, polyacrylics, and other man-made fibres.

RAW MATERIALS 2T
Tuesday 2 to 3 in the second term.
The principles of inheritance and breeding, with special reference to wool and cotton. The identification of fibres and the analysis of fibre blends.

RAW MATERIALS 1A
Monday 10 to 11 for students reading for the degree of Bachelor of Arts.
As for Raw materials 1T.

TEXTILE PHYSICS 1P
Thursday 3 to 4, in the third term.
Introductory lectures on the applications of physical methods to textiles.

TEXTILE PHYSICS 2P(i)
Thursday 9 to 10.
Free and forced vibrations; damping and resonance; basic a.c. theory; production and dissipation of static electricity; dielectrics.

TEXTILE PHYSICS 2P(ii)
Monday 12 to 1.
Hygrometry and moisture relations of fibres; heat of wetting; physical basis of diffusion; heat conduction. Friction; the elements of elasticity.

TEXTILE PHYSICS 2P(iii)
Tuesday 4 to 5.
Light. Combination of wave motions. Light sources; photometry; colour and colour perception. Light microscopy, the elements of phase and interference microscopy. The electron microscope—the principles of electron lenses and image foundation.

TEXTILE PHYSICS 3P
Thursday 12 to 1 and 4 to 5; Friday 4 to 5.
Physical methods of investigating fibre structure, with details of the application of light optics, X-ray diffraction, infra-red absorption and the electron microscope. Detailed discussion of the structure of the principal natural and

man-made fibres in the light of such investigations. The mechanical properties of fibres; time effects and visco-elasticity.

TEXTILE PHYSICS 1A

Friday 9 to 10 for students studying for the diploma in textile industries unless specially exempted.

An introduction to Textile physics 2A.

TEXTILE PHYSICS 2A

Tuesday 10 to 11 for students studying for the diploma in textile industries.

Fundamental concepts of thermodynamics. Kinetic interpretation of the equivalence of heat and dynamic energy. Gaseous, liquid and solid states of matter; crystals.

Wave nature of radiation. Interference and diffraction phenomena. X-rays. Phase contrast and interference microscopes. Polarised light. Double refraction and birefringence. Electron microscope. Infra-red absorption.

TEXTILE PHYSICS 3A

Third year; Wednesday 9 to 10 for students reading for the diploma in textile industries.

Linear polymers—their shape, size and modes of aggregation; fine fibrillar structure. Surface morphology. Details of some physical methods of investigating fibre structure.

Physical properties of fibres in terms of their structure.

TEXTILE CHEMISTRY 1C

Thursday 3 to 4 in the first and second terms.

A general survey of the chemical composition, structure and reactivity of the chief natural and man-made fibres. Applications of chemistry to the processing of textile fibres.

The mechanics of man-made fibre production. Extrusion as the basic technical device used in the production of man-made fibres. Fundamental mechanical requirements for a successful extrusion process—spinnerets, metering pumps, filters, take-up or winding mechanisms, twisting devices. Detailed consideration of the three basic spinning processes, viz., wet spinning, dry spinning and melt spinning.

TEXTILE CHEMISTRY 2C(i)

First term, Tuesday 9 to 10; Thursday 10 to 11 throughout the session.

A basic treatment of atomic and molecular structure, valency, thermodynamics, phase equilibria, chemical reaction and equilibrium, electrochemistry, kinetics, surface chemistry and colloids with examples of the application of these concepts to textile materials and processes.

TEXTILE CHEMISTRY 2C(ii)

Second and third terms; Tuesday 9 to 10.

Chemical constitution and reactivity of proteins (especially keratins), carbohydrates and synthetic polymers. Qualitative and quantitative methods of analysis of mixtures of textile fibres. Soaps and surface-active agents. Theories of detergency.

TEXTILE CHEMISTRY 2C(iii)
Friday 12 to 1 throughout the session.
Aliphatic and aromatic hydrocarbons and their derivatives. Oils, fats and waxes. Heterocyclic compounds; organic chemistry of sulphur, silicon and phosphorus; organometallic compounds.

TEXTILE CHEMISTRY 3C(i)
Monday 12 to 1.
Advanced studies of the constitution, structure and properties of proteins and polysaccharides, paying special attention to the properties of keratins, cellulose, pectins and starch.

TEXTILE CHEMISTRY 3C(ii)
Tuesday 9 to 10.
*Polymer Chemistry.* The physical and chemical properties which a polymer requires if it is to be used as a textile fibre. Kinetics, mechanism, control and distribution of molecular weights in the condensation polymerization of nylon and Terylene. Kinetics and mechanisms of radical-initiated addition polymerization of vinyl monomers. Fractionation. Ionic initiation and stereospecific polymerization. Measurement of molecular weights of polymers and fractions. Polymerization of amino acids into proteins in the living cell.

*The chemistry of the viscose process.* Alkali cellulose and its formation and constitution. The effects of maturing time on the later stages of the process. Cellulose xanthate and the xanthation reaction. Structure and properties of cellulose xanthate. The ripening process: tests for ripeness, the effect of additives on the behaviour of the xanthate during coagulation. Coagulation and the effect of variations in the composition of the coagulating bath. The finishing of viscose yarns: desulphurisation, softening, etc. Wet spinning of polymers other than cellulose.

*The chemistry of cellulose acetate.* Solution properties of triacetate and secondary acetate. Preparation of spinning solutions, use and function of co-solvent. Residual solvent and its bearing on solvent recovery. Spinning stretch and its effect on orientation. Delustring of acetate yarns. Production of strong yarns.

*Physical chemistry of melt spinning.* Spinning conditions, e.g. spinneret size, rate of extrusion, spinning stretch, etc., as related to filament structure and properties. Drawing and its effect on orientation. Second order transition points and their significance in the drawing. Crystalline and non-crystalline polymers.

TEXTILE CHEMISTRY 3C(iii)
Thursday 2 to 3.
*Wool division.* Chemical processes used in the finishing of fabrics containing wool—shrink-resisting, rotproofing, mothproofing, waterproofing and bleaching. Production of minimum-care fabrics. Recent research on the finishing of fabrics containing wool.

*Man-made fibres division.* Detailed consideration of modern resin finishing, softening, stiffening, rotproofing, waterproofing and fireproofing. Permanent finishes on cellulosic and other fabrics. Embossing and parchmentising. Finishes involving the use of such reagents as cellulose ethers, isocyanates and vinyl compounds. The dimensional stability of textile fabrics with special reference to the significance of cross-linking agents. Finishing of fabrics containing both natural and man-made fibres. The use of chemical tests in the textile industry, e.g. estimation of fibre damage.

TEXTILE CHEMISTRY 1A

First year; Thursday and Friday 12 to 1 for students studying for the degree of Bachelor of Arts or the diploma in textile industries unless specially exempted.

The constitution, preparation and properties of compounds of particular interest in textile processing, including oils, soaps, detergents, water, solvents and dyes. Simplified illustrations of long chain molecules and their formation; modes of cross-linking and the effect of reactive groups. An outline of the molecular structure and chemical properties of the more important natural and man-made fibres.

TEXTILE CHEMISTRY 2A

Tuesday 9 to 10.

Chemical testing and its application to fibre identification and to the identification of damage to fibres. Requirements of water supplies, water softening, and problems of effluent disposal. The chemistry of soaps and synthetic detergents; analysis of soaps and oils. A more detailed treatment of wool structure and chemistry; theories of dyeing.

TEXTILE CHEMISTRY 3A

Monday 12 to 1 and 2 to 3.

Carbohydrates and polysaccharides; the structure of cellulose and its relation to textile processing, e.g., resin finishing, fireproofing and rot-proofing. Reactions of wool with special reference to finishing processes, e.g. non-shrink finishes, permanent pleating, mothproofing and stabilisation. A more advanced treatment of polymer chemistry and the chemistry of viscose and acetate rayon production.

TEXTILE ENGINEERING 1E

Monday 10 to 11.

*Heat engineering.* Generation and properties of steam, and its use for industrial and space heating. Steam tables and their use in solving specific industrial heating problems. Steam accumulators, heat pumps and waste heat recovery.

Heat transfer by radiation, conduction, forced and free convection. Heat conservation, lagging and insulating materials. The drying of textile materials, including psychrometric aspects.

*Motion engineering.* Linear motion—simple harmonic motion and constant speed, with examples. Rotary motions, constant and intermittent. Speed changing—gears, step pulleys, variable speed gearboxes. Ratchet drives, single and multiple ratchets. Maltese cross drive.

TEXTILE ENGINEERING 2E
Tuesday 11 to 12.

*Power engineering*. Continuation of motion engineering from the point of view of power requirements for operating the various motions described and for machines as a whole. Starting demands, frictional components of power demand. Efficiencies and horsepower requirements, torques and torque amplification. Determination of torque, calculation of required horsepower.

*Electrical engineering* (including lighting). Basic principles of a.c. commutator motors, a.c. three-phase induction motors, and split-phase induction motors. Power factor and efficiency of motors, power factor correction, and the cost of electric power. Variable-speed motors and their applications in industrial driving. Other variable-speed devices, e.g. magnetic slip couplings, their uses and limitations.

Principles of vision and illumination. Industrial light sources. The design of modern lighting systems, determination of room characteristics, required intensity, distribution and the avoidance of glare. Relative costs and optimum lighting levels. Maintenance of lighting systems.

TEXTILE ENGINEERING 3E(i)
Tuesday 12 to 1.

Automatic control in outline; open and closed loops. Static behaviour of a closed loop control system. On-off and proportional control; offset, integral control; instability; hunting. Frequency method of analysis; mechanical, electrical and hydraulic analogues. Typical response of various systems; derivative control; response of various controllers; single treatment of response of system to step function. Limitations and advantages of frequency methods. Simple approach to setting of controls. Methods of measurement. Simple description of actual controllers, mechanical, pneumatic and electronic; introduction to electronics; thermionic valves; transistors; amplifiers, wave-shaping and switching circuits; controlled rectifiers; applications of electronic devices in textile machines and testing equipment.

TEXTILE ENGINEERING 3E(ii)
Tuesday 10 to 11.

Theories and measurements of the effect of friction on single fibres and on fibre assemblies during drawing and spinning. Mathematical treatment of the spinning process. Fibre control and recent drafting theories. Theoretical treatment of yarn strength.

Fabric engineering—the physical properties of textile fabrics in terms of their construction and yarn properties. Fabric geometry; effect of fabric construction and yarn configuration on cloth dimensions. Development of theories of fabric structure from both geometrical (Peirce) and physical concepts. Shearing and buckling of fabrics.

YARN MANUFACTURE 1T
Monday 2 to 3.

Principles underlying the various processes used in the conversion of fibres into yarns. Opening, cleaning, drying and mixing; sliver formation, fibre

parallelisation, combing, attenuation and doubling. Spinning, insertion of twist and package formation; folding. Survey of woollen, worsted and cotton systems of yarn production. Principles of tow conversion.

WOOLLEN YARN MANUFACTURE 2T
Wednesday 9 to 10.
Detailed consideration of the theory and practice of scouring, drying, carbonising, rag-pulling, blending, oiling, carding, spinning and twisting. Production of fancy yarns.

WOOLLEN YARN MANUFACTURE 3T
Friday 2 to 3.
Problems encountered in the manufacture of woollen yarns. Composition of plants suitable for the manufacture of various types of woollen yarns. Processing of blends of wool and other fibres on the woollen system. Detection and prevention of faults. Modern developments; applications of research to practical yarn production.

WORSTED YARN MANUFACTURE 2T
Friday 9 to 10.
Detailed consideration of the theory and practice of scouring, drying, carding, gilling, combing and top making, drawing, spinning, twisting, reeling and yarn scouring. Production of coloured yarns.

WORSTED YARN MANUFACTURE 3T
Friday 2 to 3.
Problems encountered in the production of worsted yarns. Composition of plants for the manufacture of various types of worsted yarns. Processing of blends of wool and other fibres on the worsted system. Detection and prevention of faults. Modern developments; applications of research to practical yarn production.

EXPERIMENTAL WORK
*Woollen and worsted yarn manufacture*
Woollen section: Experiments in scouring, blending, rag-pulling, carding, spinning and twisting.

Worsted section: Experiments in carding, gilling, combing, drawing, spinning and twisting.

STAPLE FIBRE YARN MANUFACTURE 2T
Wednesday and Friday 9 to 10.
Detailed study of blowroom operations, carding, combing, drawing, spinning and twisting on the cotton system, with special reference to short staple man-made fibres; blending; cotton waste processing. Tow conversion processes. Uptwisting of continuous filament yarns; production and properties of textured filament yarns.

STAPLE FIBRE YARN MANUFACTURE 3T
Friday 2 to 3.
More advanced treatment of cotton carding; recent research in carding and its

application to processing. Drawframe drafting systems; yarn irregularity. Theory of the spinning balloon; static electrification of fibres and yarns. Direct sliver-to-yarn spinning.

EXPERIMENTAL WORK

*Staple fibre yarn manufacture*

Experiments in scutching, carding, combing, drawing, spinning and twisting on the cotton system. Uptwisting and rewinding of continuous filament yarn. Production of textured filament yarns. Tow conversion on the Turbo Stapler.

FABRIC MANUFACTURE 1T

Thursday 9 to 10 and 2 to 3.

Basic types of woven fabric, representing weave interlacing on point paper, single weave structures—plain, warp and weft cords, matts, twills (simple, fancy, 45 degree and steep), sateens, satins, sateen derivatives and diced weaves. Colour-and-weave effects. Combination of weave or colour-and-weave effects for stripes, checks and figured designs on simple motifs. Drafting and pegging.

Elementary treatment of the machines and processes in the conversion of yarns as obtained on spinners' packages to woven cloth. Cheese and cone winding, pirn winding, warping, sizing, drawing-in and sleying and weaving. Classification of loom mechanisms as primary, secondary and auxiliary and explanation of the simpler forms of these mechanisms.

The basic principles of woven fabric analysis, and the calculation of data for cloth reproduction. Recognition of fabrics and of yarns and materials used in their construction. Elementary weave analysis.

Definition of knitted structures. General description of the range of machines, products and uses. Historical review of the growth of the knitting industry leading to recent developments in the industry and a discussion of the present size and composition of the industry.

Basic knitting action (latch needle knitting with sinker) for plain structures. Rib and interlock structures and machines for producing these structures. Point-to-point and delayed timing. Dial cylinder machines, flat bed machines, superimposed cylinder and purl machines. General description of machines to produce knitted fabrics, underwear and outerwear garments, hose and half-hose. The finishing of knitted fabrics.

CLOTH STRUCTURE 1T

Saturday 11 to 12.

Methods of weave construction more elaborate than those discussed in Fabric manufacture 1T. Weaves for special textures—combining weaves, end-and-end and pick-and-pick, transposing ends and/or picks, crepe weaves, honeycombs, Grecians, Brightons, Bedford cords, welts and piqués. Warp- and weft-backed cloths. Double cloths (self and centre-warp stitched). Wadding in backed and double cloths. Developing spots and small figured effects by

(a) combination of weaves and (b) use of extra warp and/or weft. Interchanging of warp and/or weft in backed and double cloths. Sett/count/weight calculations for simple woven structures.

CLOTH STRUCTURE 2T
Friday 3 to 4.

Planning elaborate figured styles for (a) dobby looms (by drafting) and (b) Jacquard looms, in various weave combinations and using extra warp and/or weft. Interchanging double cloth designs with particular emphasis on double plains. Pseudo backed cloths. Indent twills. Cut effects in single and double cloths; hungbacks; stitched twills and matts. Multiple warp and weft figured styles. Sett/count/weight calculations for compound weave structures.

COMPLEX TEXTILES
Thursday 3 to 4.

Cloth structures including carpets, velvets, brocades, tapestry and gauze.

EXPERIMENTAL WORK
*Handloom weaving*

First year: Standard single weave structures, simple figured styles and colour-and-weave effects. Random ranges.

Second year: Advanced weave structures, including compound fabrics, gauze and Jacquard figured styles. Range weaving. Production of original and commercial designs and fabrics.

Third year: Original work for thesis and weaving competitions.

WEAVING MECHANISMS 1T
Monday 9 to 10.

Advanced treatment of machines and equipment for, and their application in, the processes preparatory to weaving. Calculations for warping and drawing-in. Detailed discussion of loom mechanisms—(i) tappet, dobby and Jacquard shedding, (ii) picking and checking, (iii) beating-up, (iv) box arrangements (revolving and drop), (v) reversing, (vi) warp let-off, (vii) cloth take-up, (viii) warp and weft breakage detectors, (ix) warp protectors and (x) automatic weft supply (shuttle and pirn changing). Cutting and lacing cards for Jacquard looms. Ties and mounting of Jacquard harness. Casting-out Jacquard harness for various weave repeats or setts and for special effects. Planning the method of running shuttles for (a) weft mixing and (b) fancy colour patterns.

WEAVING MECHANISMS 2T
Saturday 9 to 10.

Special Jacquard mechanisms—(i) for conventional weaving (open shed, springless, pressure harness, split harness and twilling arrangements) and (ii) for pile weaving (Wilton and gripper Axminster structures). Causes of wrong lifting by dobby and Jacquard mechanisms. Shedding adjustments and their effects. More advanced treatment of weft insertion mechanisms

—(i) factors affecting shuttle flight, (ii) researches on shuttle velocity, acceleration and deceleration; and (iii) shuttleless methods. Sley displacement studies. Recent studies on the effects of tensions in winding, warping and weaving. Theory of pick spacing and how influenced and controlled by let-off, take-up, shed change, beat-up, warp tension, etc. More detailed study of automatic weft supply mechanisms including multi-colour systems, the "Unifil system", battery loaders and calculations of looms per weaver. Equipment and loom mechanisms for leno weaving. Methods of producing pile structures—(a) chenille weft, (b) wire insertion, (c) face-to-face, (d) gripper and (e) spool.

EXPERIMENTAL WORK

*Powerloom weaving*

Demonstrations and experiments on cheese and cone winding machines, pirn-winding machines, warping machines, drawing-in frame, card cutting and card lacing machines and tappet, dobby, Jacquard and carpet looms.

KNITTING 1T

Thursday 11 to 12.

Detailed descriptions of the functions of the components of knitting machines —yarn packages, stop motions, ceramic pot eyes, disc tensioners, feed units, stretcher boards, take-down tension mechanisms.

Bearded needle production of plain fabrics—fully fashioned knitting, terrot knitting. Fabric geometry. Dimensional properties of plain knitted fabrics, quality control of knitted fabrics, factors affecting fabric dimensions, quality, weight, etc. Theory and practice of stitch control methods. Calculations of relaxed dimensions of knitted fabrics; prediction of fabric shrinkage.

Fabric spirality; twist liveliness. Effect of fabric cover factor on properties of knitted fabrics.

Modification of the basic knitted structure; striping, striping mechanisms, plating, reverse plating, plush, laid-in fabrics, tuck stitch, float or miss stitch (Fair Isle), needle transfer methods, fully-fashioning.

Patterning methods, pattern wheel, Jacquard; etc. Garment production; use of chain to control garment dimensions. Automatic changing of structure.

KNITTING 1A

Friday 12 to 1.

A more elementary treatment of the subjects of Knitting 1T.

KNITTING 2T

Thursday 3 to 4.

Detailed study of warp knitted constructions and selected warp knitting machines.

Details of garment production methods. Construction of hose and half hose. Mechanical arrangements for garment production. Patterning methods. Properties of fabrics knitted from bulked and stretch yarns. Effect of these yarns on the structure of the industry. Mechanics of knitting cam design. Finishing of knitted fabrics and dimensional changes during finishing.

EXPERIMENTAL WORK

*Knitting*

First year: Demonstrations of machines and knitting principles discussed in Knitting 1T lectures. Experiments to show methods of controlling stitch length and fabric quality. Measurements of fabric parameters; structural analysis of simple knitted fabrics.

Second year: Analysis and production of more complicated fabric structures; practical experiments on knitting machines; control of fabric dimensions and quality. Modern research techniques.

TEXTILE CALCULATIONS 1A AND TEXTILE MATHEMATICS 1A

Monday 12 to 1 and Tuesday 9 to 10.

These courses serve as an introduction to textile calculations 1B and are taken by all students studying for the diploma in textile industries or the degree of Bachelor of Arts, unless specially exempted.

TEXTILE CALCULATIONS 1B

Friday 2 to 3 for students studying for the diploma in textile industries or the degree of Bachelor of Arts.

Units and conversion factors. Woollen, worsted and cotton counts of single and double yarns, denier and other direct count systems. Effect of grease content and regain on count. Wool quality and worsted count. Warp, weft and cloth relationships, e.g. weight as a function of weave, firmness, sett and count. Reed and heald numbering, casting out. Elementary cloth setting theory. Knitting gauge. Output of carding engines. Yield of combs. Gear ratios, draft and twist in drawing and spinning. Blends in yarn and cloth. Wage rates and efficiency.

CLOTH ANALYSIS 1T

Saturday 9 to 10, and practical work.

The appraisal and analysis of all types of tappet, dobby, and simple Jacquard fabrics made from natural and/or man-made fibres. Techniques of fabric analysis applicable to drafted fabrics, checks, colour-and-weave effects, simple or crammed striped suitings and heavily milled fabrics.

The production and presentation of drafts, peg plans, warping and wefting plans. The balancing of warping and sleying plans and the calculations involved. Loss of weight during finishing. The preparation of suitable particulars for the reproduction of fabrics and the modification of such data to meet the requirements of the consumer, manufacturer or designer. Tolerance limits when checking accuracy after modifying data in accordance with commercial practice. The classification of wool, cotton and continuous filament fabrics.

CLOTH ANALYSIS 2T

Combined lectures and practical work on Friday 11 to 1 *or* Saturday 10 to 12.

The appraisal and analysis of backed, self-stitched, centre-stitched, wadded, weft reversible, interchanged, extra warp and/or weft, multiple warp and weft dobby or figured, warp pile, weft pile, Jacquard and novelty fabrics.

Weave gamuts, card cutting instructions and calculations applicable to simple and compound Jacquard fabrics. Draft, peg plans, sleying, warping plans and calculations of reproduction data for novelty and compound fabrics.

CLOTH ANALYSIS 1A
Thursday 10 to 11.
As for Cloth analysis 1T except that the consideration of simple Jacquard fabrics is omitted.

CLOTH ANALYSIS 2A
Combined lectures and practical work Friday 2 to 4; Tuesday 12 to 1 and 2 to 3.
As for Cloth analysis 2T.

PRINCIPLES OF PATTERN DESIGN
First year: Wednesday *or* Friday 10 to 12.
Second year: Thursday 10 to 12.
Third year: Monday 10 to 12.
As for Textile design.

TEXTILE DESIGN
First year: Friday 10 to 12.
Second year: Thursday 10 to 12.
Third year: Monday 10 to 12.
Experiments in different media to produce stripe, check and all-over repeating patterns. The value of proportion, rhythm, texture, colour and tone in the composition of designs. Traditional and modern treatments of the designer's subject matter. The historical developments of pattern in textiles and allied subjects, and their influence on present-day textiles. Further developments in designing patterns to be produced on tappet, dobby and Jacquard looms, taking into consideration different types of yarn and fabric structure for woven textiles. Designs for screen printed dress and furnishing fabrics.

COLOUR STUDY 1T
Wednesday 9 to 10.
Colour theories and the attributes of colours; contrast and analogy; colour blending; application of colour to woven design; special colour and weave effects.

COLOUR STUDY 2T
Monday 2 to 3.
The economical introduction of colour into woven fabrics; the colour limitations of woven design; the introduction of colour into stripes, checks and figured fabrics, the colouring of special woven styles; the colouring of double cloths, gauzes and plushes.

DYEING 1T
Thursday 9 to 10 and practical dyeing *either* Wednesday 10 to 1 *or* Thursday 10 to 1 in the department of colour chemistry and dyeing.
The introduction of colour into textiles by dyeing, printing and mass-pigmentation. Classification of textile fibres and dyes. Colour perception,

colour mixing and colour matching in theory and practice. Colour fastness —definition, specification and assessment, with particular reference to light and wet treatments. Dyes for wool—their application, fastness properties and uses, including acid dyes, premetallised dyes, mordant dyes and vat dyes. Dyes for cellulosic fibres including direct dyes, vat and solubilised vat dyes, azoic dyes, aniline black, reactive dyes, resin-bonded pigments. Dyes for secondary cellulose acetate, triacetate, polyamide, polyester and polyacrylonitrile fibres. The dyeing of fibre mixtures. Dyeing machinery. An introductory treatment of textile printing.

Practical work includes small-scale dyeing trials on wool, cotton, secondary cellulose acetate and the newer man-made fibres.

DYEING 1TD
Wednesday 9 to 10.
An elementary treatment of the topics considered in Dyeing 1T.

CLOTH FINISHING 1T
WOOL DIVISION
Monday 9 to 10.
The objects of finishing, résumé of the operations used in the finishing of textile fabrics. Impurities in wool fabrics; wool oils, sizes. Reagents used in the cleansing and finishing of wool fabrics; water and water softening, soaps and detergents, soap builders, solvents, bleaching agents; disposal of effluents. Principles and practice of the following processes: inspection; singeing; crabbing and other methods of setting; scouring; milling; hydroextraction and tentering; raising; cropping; brushing and steaming; pressing. The dimensional stability of wool fabrics—London shrinking, sponging, and methods of relaxing cloth before tailoring.
Routines adopted in the finishing of fabrics containing wool. The effects of finishing on the physical properties of wool fabrics. Lay-out of plant. Finishing costs. Methods study in textile finishing.

CLOTH FINISHING 2T
MAN-MADE FIBRES DIVISION
Monday 4 to 5.
The principles and practice of finishing cotton, linen, jute, silk and man-made fibre fabrics; sizing in relation to finishing; singeing; setting man-made fibres by dry heat and by steam; de-sizing; kier boiling; scouring; de-gumming; bleaching (batch and continuous) of all types of fabric; drying; stentering; filling; calendering; beetling and breaking. Mercerising, creping and the finishing of crepe fabrics. Fabric coating. Lay-out of plant.

EXPERIMENTAL WORK—CLOTH FINISHING
WOOL DIVISION
Manipulation of the various machines used in the finishing of woollen and worsted cloths. Production of special finishes on woollen and worsted fabrics. Finishing of fabrics containing mixtures of wool and other fibres.

MAN-MADE FIBRES DIVISION
Wednesday 10 to 12.
Manipulation of the various machines used in the finishing of cotton and

man-made fibre fabrics. Production of special finishes. Resin finishing. The evaluation of textile finishes.

During each course the finishing of various special cloths will be demonstrated, and students will be provided with patterns of the material at different stages of finishing.

PHYSICAL TESTING (METHODS)

Tuesday 3 to 4 throughout the session for degree students.

Atmospheric humidity; tests for moisture content of textile materials. Tests for count and twist of yarns, and the irregularity of yarns and rovings. Tensile testing of textile materials—time, shape and sampling effects and the adaptation of instruments and methods for fibres, yarns and fabrics. The resistance of fabrics to abrasion and pilling. General properties of fabrics: weight, thickness, friction, thread slippage, bending length, flexual rigidity, formability and resistance to sheer couples; the relationship between these physical properties and the subjectively evaluated handle of fabrics. The retention and shedding of applied creases. The air permeability and water-resisting properties of fabrics. The assessment of damage in wool and cotton.

The choice and organisation of test methods and the use of control charts.

Laboratory experiments on measurement of the length and fineness of wool fibres; determination of count, twist, strength, extension and irregularity of yarns; tensile and bursting strength of cloth; abrasion resistance; thickness, crimp and other fabric properties. Identification and quantitative analysis of fibre mixtures.

PHYSICAL TESTING — (STATISTICS) 1

Thursdays 9 to 10 throughout the session for degree students.

Frequency curves. The mean, median, mode, mean deviation, standard deviation, variance and standard error. Tests of significance for application to textile problems—students' t-test, chi-squared, correlation, curve-fitting.

STATISTICS AND TEXTILE TESTING

Tuesday 12 to 1 and 3 to 4, Thursday 12 to 1 and Friday 4 to 5, for students studying for the degree of Bachelor of Science in textile industries. Practical textile testing Thursday 2 to 5.

The course comprises two lectures per week in the mathematics department and two lectures and three hours' practical work per week in the department of textile industries.

The lectures in the department of textile industries cover the subjects described under Physical testing (methods) with appropriate extensions and the application of statistical methods to testing problems, including the use of frequency curves in textile practice and research; the mean, median, mode, mean deviation, standard deviation, variance, standard error and higher moments, as measures of the distribution, skewness and probability; tests of significance for application to textile problems—students' t-test, chi-squared, variance ratio, correlation, curve-fitting, and analysis of variance. Application of statistical techniques to problems of yarn variability, fibre length, quality control, and analysis of data.

TEXTILE TESTING 1A
Friday 4 to 5 for diploma students and students studying for the degree of Bachelor of Arts in textile design or textile management.
As listed under Physical testing (methods) with appropriate deletions.

PHYSICAL TESTING (STATISTICS) 1A
Tuesday 12 to 1 *or* Thursday 9 to 10 for diploma students.
As listed under Physical testing (statistics) 1 with appropriate deletions.

MILL MANAGEMENT
Monday 3 to 4 throughout the session.
Factory organisation—site, buildings, lay-out, choice of machinery and equipment. Scientific selection and training of operatives. Motion and time study. Incentives. Wage plans. Charts and other aids to production control. Legislation and industry. Cost accounting and control. Analysis of costing systems typical of the textile industry.
For courses in Industrial management see p. 452.

VACATION WORK IN MILLS
A panel of some 80 firms willing to accept British students for vacation work has been established with the help of the Wool and Allied Textile Employers' Council, Courtaulds Limited, Imperial Chemical Industries Limited, and other organisations. The practical training given in the department can thus be supplemented by industrial experience, and all students are expected to take advantage of this very great privilege during the summer vacation. Special arrangements of a different type are made for overseas students.

## COLOUR CHEMISTRY AND DYEING

*For the Ordinary degree of Bachelor of Science and for the degree of Bachelor of Science with Honours in colour chemistry*

DYEING 1
Second year; Monday 10 to 11.
The classification of textile fibres and dyes. Colour perception, colour mixing and colour matching. Colour fastness—definition, specification and assessment. Classes of dyes and dyeing methods for protein fibres.
Examination: 1 paper.

DYEING 2
Second year; Monday and Wednesday 12 to 1.
The chemistry and properties of organic high polymers; water and auxiliary products; non-textile substrates.
Examination: 1 paper.

DYEING 3
Third year; Monday 3 to 4, Thursday 3.30 to 4.30 and Friday 11 to 12.
Classes of dyes and dyeing methods for natural and regenerated cellulosic fibres, cellulose acetates, polyamide, polyester and polyacrylonitrile fibres, including mass-pigmentation. Continuous dyeing methods. Dyeing

machinery. Dyeing of fibre mixtures. Textile printing. Theory of dyeing. Colour and colour measurement.

The Dyeing 1 and 3 lecture courses form a continuous main course in textile colouration.

Examination: 1 paper.

COLOUR CHEMISTRY 4

Third year; 1st term, Tuesday 2 to 3 and Friday 9 to 10; 2nd term, Tuesday 2 to 3.

The chemistry of intermediates and dyes.

Examination: 1 paper.

LABORATORY COURSE IN DYEING 1

Second year; 7 hours a week at times to be arranged.

Small scale dyeing experiments in which different classes of dyes are applied to the various types of textile fibres.

LABORATORY COURSE IN DYEING 2

Third year; 22 hours a week at times to be arranged.

First term and part of 3rd term only.

Experimental dyeing laboratory work including colour matching, identification of textile fibres and dyes in textile fibres. Examination and evaluation of commercial dyes, and technical analysis. Practical dyehouse work including dyeing of materials in various types of machines. Textile printing.

*For the degree of Bachelor of Science with Honours in colour chemistry*

COLOUR CHEMISTRY 5

Fourth year; Tuesday and Thursday 11 to 12.

Chemistry of anthraquinone dyes, indigoid and thioindigoid dyes, solubilized vat dyes, sulphur dyes and phthalocyanines; polymethine, azine and dioxazine dyes.

Examination: 1 paper.

COLOUR CHEMISTRY 6

Fourth year; Monday 2 to 3.

Metal-containing dyes and pigments. Relations between physical properties and chemical constitution of dyes.

Examination: 1 paper.

COLOUR CHEMISTRY 7

Fourth year; Thursday 2 to 3.

Modern physical techniques in organic chemistry, including spectrophotometry, electron paramagnetic resonance, nuclear magnetic resonance spectroscopy and chromatography. Photochemistry of dyes.

Examination: 1 paper.

COLOUR CHEMISTRY 8

Fourth year; Friday 2 to 3.

Chemistry of pigments considered mainly from the physical chemistry standpoint.

Examination: 1 paper.

DYEING 4
Fourth year; Tuesday 10 to 11.
Advanced general and thermodynamic theory of dyeing.
Examination: 1 paper.

LABORATORY COURSE IN COLOUR CHEMISTRY 4
Third year (2nd term); 25 hours a week at times to be arranged.
Quantitative analyses of raw materials and intermediates. Technical methods of analysis. Preparation of intermediates, dyes and pigments by technical methods, etc.

LABORATORY COURSE IN COLOUR CHEMISTRY 5, 6 AND 7
Fourth year (one term); 25 hours a week at times to be arranged.
Preparation of several dyes and modern methods of analysis and purification.

LABORATORY COURSE IN COLOUR CHEMISTRY 8
Fourth year (one term); 25 hours a week at times to be arranged.
Preparation and testing of pigments. Instrumental methods of colour measurement.

*For the Ordinary degree of Bachelor of Science, the degree of Bachelor of Science with Honours, the degree of Bachelor of Arts and the postgraduate and non-graduate diplomas in textile industries*

DYEING 1T
Third or 4th years, Thursday, 9 to 10.
The classification of textile fibres and dyes. Mass-pigmentation. Colour perception, colour mixing and colour matching in theory and practice. Colour fastness—definition, specification and assessment. Dyeing of protein, cellulosic and man-made fibres. Dyeing of fibre mixtures. Dyeing machinery. Principles of textile printing.
Examination: 1 paper (for diploma students only).

## FOOD AND LEATHER SCIENCE

*For the Ordinary degree of Bachelor of Science, and for the degree of Bachelor of Science with Honours in food science*

FOOD TECHNOLOGY F1
First year, Monday and Friday, 10 to 11, Saturday 9 to 10, and 3 hours a week laboratory work.
The nature of the world's food supplies, their classification, and their relationship to population. The different branches of the food industry, their organisation and their principal processes.
Examination: 1 paper.

FOOD TECHNOLOGY F2
Second year, Tuesday 11 to 12.
The development of food legislation, its enforcement, and the special problems of food additives. Statistical techniques of value in quality control.
Examination: 1 paper.

ANALYTICAL CHEMISTRY AND MICROSCOPY OF NATURAL PRODUCTS LF3

Third year, Monday 10 to 11, Tuesday and Thursday, 12 to 1; 6 hours a week laboratory work.

The principles of analysis (gravimetric, volumetric, colorimetric) applied to natural products. Sampling. Modern techniques of analysis. The use of the light microscope in the examination of natural products. Staining techniques, phase contrast microscopy.

Examination: 1 paper.

CHEMISTRY OF NATURAL PRODUCTS LF4

Third year, Monday, Wednesday and Friday, 9 to 10; tutorials, Tuesday and Thursday, 9 to 11.

Water, aqueous solutions, proteins and enzymes, carbohydrates and fats. Colloid science.

PHYSICS, CHEMISTRY and MICROBIOLOGY OF FOOD PROCESSES F4

Third year; 2 hours a week at times to be arranged.

Basic principles of corrosion. Physical and mathematical basis of thermal processing, microbiology of foodstuffs. Combined examination for LF4 and F4: 2 papers.

FOOD PROCESSING AND PRESERVATION F6

Third or fourth year: Monday, Wednesday and Friday, 12 to 1.

The relations between processing, microbiological conditions, nutritive value, chemical composition, texture and acceptability, illustrated by the principal means for preserving foods and preparing them for the market.

Examination: 1 paper.

*For the degree of Bachelor of Science with Honours in food science*

PHYSICAL AND PSYCHOLOGICAL PROPERTIES OF FOODSTUFFS F5

Fourth year; 2 hours a week at times to be arranged.

The physical properties of importance in food manufacture and use. The relation of physical tests to food assessment and food acceptance. (In collaboration with the department of psychology).

Examination: 1 paper.

CHEMISTRY AND STRUCTURE OF FOODSTUFFS F7

Fourth year; 3 hours a week at times to be arranged.

Part 1 Morphology of food constituents.

Part 2 Continuation of LF4: physics and chemistry of proteins, carbohydrates and fats. Colloid science.

Part 3 Chemistry of polyphenols, natural and synthetic colours and flavours, and related topics.

Examination: 1 paper. In addition, one paper with a selection of questions from F5 (and the alternative, Agricultural bacteriology) F6 and F7.

INDIVIDUAL STUDY AND PRACTICAL WORK F8

Fourth year of the Honours course.

(i) A selection of experiments in the advanced laboratory: 6 hours a week for two terms, or three hours a week for two terms if alternative course in Agricultural bacteriology with Food bacteriology is taken.
(ii) A more extended experimental investigation: 6 hours a week for one term.
(iii) Advanced study leading to the preparation of a dissertation in a limited field: 6 hours a week for one term.

*For the Ordinary degree of Bachelor of Science, for the degree of Bachelor of Science with Honours in leather science, and for the diploma in leather manufacture*

TECHNOLOGY OF LEATHER MANUFACTURE L1

First year; 3 hours a week at times to be arranged, each followed by ¼ hour demonstration of the manufacture of various leathers.

Raw materials, pre-tanning processes, tanning processes, elementary scientific principles of leather manufacture.

Examination: 1 paper.

TECHNOLOGY OF LEATHER MANUFACTURE L2

Second year; 3 hours a week at times to be arranged, and practical work in the experimental tannery.

Further consideration of tanning processes, post-tanning processes, use problems, elementary scientific principles of leather manufacture continued.

Examination: 1 paper.

ANALYTICAL CHEMISTRY AND MICROSCOPY OF NATURAL PRODUCTS LF3

Third year, Monday 10 to 11, Tuesday and Thursday, 12 to 1, 6 hours a week laboratory work.

The principles of analysis (volumetric, colorimetric, gravimetric) applied to natural products. Sampling.

Modern techniques of analysis. The use of the light microscope in the examination of natural products. Staining techniques. Phase contrast microscopy.

Examination: 1 paper.

CHEMISTRY OF NATURAL PRODUCTS LF4

Third year, Monday, Wednesday and Friday, 9 to 10; tutorials, Tuesday and Thursday, 9 to 11.

Water, aqueous solutions, fats, carbohydrates, proteins, colloid science.

CHEMISTRY OF LEATHER MANUFACTURE L4

Third year: 1 hour a week at a time to be arranged.

The chemistry of vegetable and mineral tanning agents.

Combined examination for LF4 and L4: 2 papers.

PRINCIPLES AND METHODS OF LEATHER MANUFACTURE L6
Third or 4th year, Monday and Friday, 11 to 12, Thursday 2 to 3.
Study of modern methods of leather production.
Examination: 1 paper.

LEATHER SCIENCE LABORATORY WORK L3
Second or 3rd years, 6 hours a week at times to be arranged.
Laboratory work relating to tannery processes.

PRACTICAL LEATHER PHYSICS
Second, 3rd or 4th years, Wednesday 11 to 1.
Experimental determination of the mechanical and other physical properties of leather.

INDIVIDUAL STUDY, LABORATORY WORK AND PRACTICAL LEATHER MANUFACTURE L8—parts 1 to 3
Third and 4th years, at times to be arranged.
Part 1 Practical work in the experimental tannery.
Part 2 An extended experimental investigation.
Part 3 Advanced study leading to the preparation of a dissertation in a limited field.

*For the degree of Bachelor of Science with Honours in leather science and for the diploma in leather manufacture*

PHYSICAL BEHAVIOUR OF LEATHERS L5—parts 1 and 2
Third or 4th year, 2 hours a week at times to be arranged.
The physical properties of skin, leathers and substitute materials.
Examination: 1 paper.

ADVANCED CHEMISTRY OF LEATHER MANUFACTURE L7—parts 1 to 3
Third or 4th year; at times to be arranged.
Fundamental chemistry of materials and processes in leather manufacture.
Examination: 2 papers. In addition, 1 paper with a selection of questions from L5, L6 and L7.

## AGRICULTURE

AGRICULTURE 1
Second and 3rd years; At times to be arranged.
Outline and organisation of British agriculture. Elements of agronomy; husbandry practices for the main British crops. Methods of field investigation.
Examination: 1 paper.

AGRICULTURE 2
Second and 3rd years; At times to be arranged.
The place of livestock in British agriculture. Principles of breeding and animal production. Feeding and general management of all classes of farm livestock. Organisation of livestock enterprises.
Examination: 1 paper.

AGRICULTURE 3

Second and 3rd years; At times to be arranged.

Systems of farming. Farm layout and equipment. Farm machinery and implements. Forms of tenancy; legislation affecting landlord and tenant. Stocking and equipping farms; capital requirements. Management of farm labour. Marketing of stock and produce.

Examination: 1 paper.

AGRICULTURE 4

Fourth year; At times to be arranged.

Farm and enterprise studies. New techniques in farming.
Statistics (Agric.)

Examination: 1 paper.

AGRICULTURE 5

Fourth year: At times to be arranged.

Advanced studies in *one* of the following:
(*a*) Agronomy and crop husbandry
(*b*) Animal husbandry
(*c*) Farm management.

Examination: 2 papers.

AGRICULTURAL BACTERIOLOGY

Second year; At times to be arranged.

A general introduction to bacterial morphology and metabolism; staining, selective media and methods of isolation of micro-organisms. The bacteriology of water, soil, silage and dairying. Immunity and disease.

Examination: 1 paper and a practical examination.

AGRICULTURAL BOTANY 1

Second year; At times to be arranged.

An introduction to the morphology of crop and fodder plants (mainly British), their distribution and features of economic importance. The ecology of grasslands and rough grazings. Genetics as a basis for crop improvement.

Examination: 1 paper and a practical examination.

AGRICULTURAL BOTANY 2

Third year; At times to be arranged.

The commoner diseases of British crops and their control. The principles of genetics and their application to plant breeding and crop improvement. The identification and biology of weeds of grass and arable crops. Poisonous, injurious and parasitic plants.

Examination: 1 paper and a practical examination.

AGRICULTURAL CHEMISTRY 1

Third year; At times to be arranged.

As for Agricultural chemistry G1.

Examination: 1 paper and a practical examination.

AGRICULTURAL CHEMISTRY 2

Second year; At times to be arranged.
As for Agricultural chemistry G2.
Examination: 1 paper and a practical examination.

AGRICULTURAL ECONOMICS 1

Second year; At times to be arranged.
History: Development of farming from manorial times to the present day. Comparative agriculture. Farming in Europe and the New World. Economic theory applied to agriculture: Agriculture in the developing economy. Agriculture in the British economy. Agricultural policy. The factors of production. Land tenure, rent, farm layout. Capital: landlord's and tenant's; equipment, livestock and growing crops; requisites; capital investment in British agriculture. Credit: the credit needs of agriculture; sources of supply; legislation. Labour: hired and family labour; the division of labour; efficiency of labour; mechanisation; wages in agriculture. Elements of marketing. Demand and supply in agriculture. Price movements and income levels.

AGRICULTURAL ECONOMICS 2

Third year; At times to be arranged.
Marketing and prices: International agricultural trade. Price levels. International agreements. Surplus disposal. Agriculture and European integration. Britain's trade policy. Agricultural marketing acts. War-time policy 1939-45. Current marketing schemes. Review of market intelligence.
Farm management: Analysis of the problems which confront a farm manager. Economic guides to the selection of the appropriate enterprises and methods of production. The importance of input-output and substitution relationships, fixed and variable costs, and risk and uncertainty. Methods of analysing and appraising farm businesses from accounts and records. Techniques for the selection and testing of alternative management proposals.
Examination: 2 papers (covering 1 and 2) and an oral examination.

AGRICULTURAL ZOOLOGY

Second year; At times to be arranged.
An introduction to entomology and helminthology. Insect and other pests of crops. External and internal parasites of domestic animals. The principles of pest control.
Examination: 1 paper and a practical examination.

ANIMAL PHYSIOLOGY AND VETERINARY SCIENCE

Second year; At times to be arranged.
An introduction to the anatomy and physiology of farm animals including the practical applications of physiological research. Pathological processes in farm animals, the recognition of health and a consideration of common diseases and their control by eradication or prevention.
Examination: 1 paper and a practical examination.

*For the degree of Bachelor of Science with Honours in agricultural botany*

AGRICULTURAL BOTANY G1

At times to be arranged.

Crop plants: The taxonomy and comparative morphology of arable and herbage plants. The physiology of germination, development and reproduction in plants and the influence of environmental factors on growth.

Ecology: Plant ecology and its bearing on agriculture with particular reference to grassland associations.

Examination: 1 paper and a practical examination. [This course is given in alternate years.]

AGRICULTURAL BOTANY G2

At times to be arranged.

Plant pathology: An introduction to the study of disease in plants, the more important British diseases; their incidence and control. Fungicides and their use.

Plant breeding: Theory and practice; the use of genetics in plant breeding and crop improvement. Methods of plant propagation and their uses.

Weeds: the taxonomy and biology of selected weed species. Poisonous and injurious plants.

Examination: 1 paper and a practical examination. [This course is given in alternate years.]

*For the degree of Bachelor of Science with Honours in agricultural chemistry*

AGRICULTURAL CHEMISTRY G1

Second year; At times to be arranged.

The chemistry and physics of soil and soil material. The formation, fertility and deterioration of soils. Soil classification and mapping. The chemistry of fertilisers and manures.

Examination: 1 paper and a practical examination.

AGRICULTURAL CHEMISTRY G2

Third year; At times to be arranged.

The chemistry of the animal and its food. The processes of nutrition. The evaluation of foods and determination of nutritive requirements. The chemistry of milk and dairy products.

Examination: 1 paper and a practical examination.

*For the degree of Bachelor of Science with Honours in the agricultural sciences*

PRINCIPLES OF AGRICULTURE

First year; At times to be arranged.

Outline of history of agriculture. World food requirements, production and marketing. British farming systems. Origin and conservation of soils; soil fertility. Crop and grass production. Livestock breeding, improvement and production. Farm management.

Examination: 1 paper.

AGRICULTURAL BACTERIOLOGY G

Third year; At times to be arranged.

The distribution and role of bacteria in the soil. Soil microbiological equilibrium. A study of the bacteriology of milk and dairy products. Bacteria causing diseases of the udder. Other milk-borne pathogens. The bacteriology of water, sewage, silage and air. Bacteria and animal nutrition Classification of organisms commonly occurring in the above environments.

Examination: 1 paper and 2 practical examinations.

AGRICULTURAL BOTANY (ADVANCED)

Fourth year; At times to be arranged.

Advanced study of selected aspects of agricultural botany particularly those in which modern developments have occurred. The syllabus will include plant pathology; plant physiology; grassland and its problems; the botany, selection and breeding of certain crop plants; statistics and the design of experiments. Instruction will be given in laboratory and other methods and techniques.

Examination: 4 papers and 2 practical examinations.

AGRICULTURAL CHEMISTRY (ADVANCED)

Fourth year; at times to be arranged.

Modern developments and methods of research in the chemistry of soils, fertilisers, crops and animal nutrition; dairy chemistry; chemistry of insecticides, fungicides and herbicides.

Examination: 3 papers and a practical examination of 2 days.

FARM ORGANISATION AND MANAGEMENT

Third year; At times to be arranged.

Systems of farming. Factors influencing the value of a farm. Forms of tenancy. Farm labour and its management.

Examination: 1 paper.

AGRICULTURAL ECONOMICS (ADVANCED)

Fourth year; At times to be arranged.

Production and distribution of agricultural income. Economics of farm management. Land economics. Advanced marketing.

Examination: 3 papers and a dissertation.

AGRICULTURAL ZOOLOGY G

Third year; At times to be arranged.

Bionomics of important agricultural and horticultural pests and parasites. Ecological factors in relation to pest and parasite problems. Theory and practice of control.

Examination: 1 paper and a practical examination.

*For the postgraduate diplomas*

FARM MANAGEMENT

The principles of husbandry and agricultural economics in the study of farm organization and management. Assessment of efficiency of farming enterprises and methods of appraising and planning farm businesses.

Examination: 3 papers, an oral examination and presentation of a thesis and/or a farm assessment.

AGRICULTURAL BACTERIOLOGY

Advanced aspects of bacterial chemistry, morphology, physiology and classification. Detailed treatment of the bacteriology of air, soil, water, milk and dairy products. Immunity and disease.

Examination: 4 papers and a practical examination.

*AGRICULTURAL BOTANY

British crop plants, their morphology, physiology and ecology in relation to farm practice. Plant breeding and crop improvement. The principal diseases of economic plants. Experimental technique.

Examination: 3 papers and a practical examination of 6 hours.

AGRICULTURAL CHEMISTRY

Advanced and recent work on the chemistry of soils, fertilisers, insecticides, fungicides, feeding stuffs, animal nutrition, milk and dairy products.

Examination: 3 papers and a practical examination of 2 days.

AGRICULTURAL ECONOMICS

The economics of agricultural production and distribution. The economics of farm organisation and management; marketing of agricultural produce; land economics; rural social organisation.

Examination: 3 papers and presentation of a thesis.

AGRICULTURAL ZOOLOGY

The identification, bionomics and control of the more important pests of agricultural and horticultural crops. Factors influencing the origin, spread and abundance of crop pests. Principles of pest control.

Examination: 3 papers and a practical examination.

*In abeyance.

# THE FACULTY OF MEDICINE

## ORDINANCE VI

### DEGREES IN MEDICINE AND SURGERY

1. The degrees in medicine and surgery shall be:
Bachelor of Medicine and Bachelor of Surgery (M.B. and Ch.B.)
Master of Surgery (Ch.M.)
Doctor of Philosophy (Ph.D.)
Doctor of Medicine (M.D.)

### THE DEGREES OF BACHELOR OF MEDICINE AND BACHELOR OF SURGERY

[IMPORTANT NOTICE: *The Ordinance and regulations for the degrees of M.B., Ch.B., particularly those referring to the clinical period of the course, are at present being revised, and the new Ordinance, regulations and schemes of study will be published in the Calendar for session 1965-66.*]

2. Candidates for the degrees of Bachelor of Medicine and Bachelor of Surgery are required to present evidence showing that they will have attained the age of twenty-one years on the day of graduation, and that they have attended courses of instruction approved by the University extending over not less than five academic years, of which at least two years have been passed in the University.

3. Before entering upon courses for the degrees of Bachelor of Medicine and Bachelor of Surgery candidates must have satisfied the requirements for entry upon a degree course as laid down by the Joint Matriculation Board of the Universities of Manchester, Liverpool, Leeds, Sheffield and Birmingham.

4. To qualify for the degrees of Bachelor of Medicine and Bachelor of Surgery candidates must satisfy the examiners in the first, second, third, fourth and final examinations.

5. The first examination shall consist of three subjects:

Chemistry, physics and zoology.

6. Candidates, before presenting themselves for the first examination, are required to furnish evidence of having attended courses of instruction in accordance with the regulations of the University.

7. The names of candidates who have satisfied the examiners in the first examination shall be published in alphabetical order.

8. The second examination shall consist of three subjects:

Anatomy
Physiology and medical psychology
Biochemistry

9. Candidates, before presenting themselves for the second examination, must have passed or have been exempted from the first examination and are required to furnish evidence of having attended courses of instruction in accordance with the regulations of the University.

10. The names of candidates who have satisfied the examiners in the second examination shall be published in alphabetical order. Distinction may be awarded in the examination in one or more of the subjects anatomy, physiology, biochemistry.

11. (a) The third examination shall consist of two parts:

Part 1 Pathology and bacteriology

Part 2 Pharmacology.

(b) The fourth examination shall consist of two subjects:

Forensic medicine

Public health.

12. Candidates, before presenting themselves for the third and fourth examinations, must have passed the second examination and are required to furnish certificates of having attended courses of instruction in accordance with the regulations of the University.

13. The names of candidates who have satisfied the examiners in the third and fourth examinations will be published in alphabetical order. Distinction may be awarded in the separate parts of the third examination or in the fourth examination.

14. The final examination shall consist of three subjects:

Medicine, surgery and obstetrics and gynæcology.

15. Candidates, before presenting themselves for the final examination, must have passed the third examination and are required to furnish certificates of having attended courses of instruction in accordance with the regulations of the University.

16. (a) Candidates who have satisfied the examiners in the fourth and final examinations may be awarded:

(i) the degrees of Bachelor of Medicine and Bachelor of Surgery with first-class Honours,

or (ii) the degrees of Bachelor of Medicine and Bachelor of Surgery with second-class Honours,

or (iii) the degrees of Bachelor of Medicine and Bachelor of Surgery.

(b) The names of successful candidates in each group shall be arranged in alphabetical order. Distinction may be awarded in individual subjects of the final examination.

[See also the regulations on page 661.]

## THE DEGREE OF MASTER OF SURGERY

17. The degree of Master of Surgery may be conferred upon Bachelors of Medicine and Bachelors of Surgery of the University of not less than five years' standing, subject to the conditions laid down in the following articles.

18. Each candidate shall present a thesis on an approved subject in surgery, or in some related field, provided that the work has an application to surgery. The thesis must be the work of the candidate and must embody the results

of personal observations or of original research. Original published work will be admissible in lieu of or in addition to a thesis specially written for the degree. Candidates may be required to appear for an oral examination on the subject matter of the thesis or the published work.

19. The names of candidates who have been approved for the degree of Master of Surgery shall be published in alphabetical order. In cases of exceptional merit the degree may, on the recommendation of the examiners, be awarded with distinction.

[See also the regulations on page 665.]

## THE DEGREE OF DOCTOR OF PHILOSOPHY

[The degree of Doctor of Philosophy is governed by ordinance II, articles 50 to 52 and relevant regulations which are set out on pages 299 and 310.]

## THE DEGREE OF DOCTOR OF MEDICINE

20. The degree of Doctor of Medicine may be conferred upon Bachelors of Medicine and Bachelors of Surgery of the University of not less than three years' standing, subject to the conditions contained in the following articles.

21. Candidates shall be required to present a thesis. The thesis must be the work of the candidate and should embody the results of personal observations or original research, either in some department of medicine or in some science directly related to medicine; provided always that original published work shall be admissible in lieu of or in addition to a thesis specially written for the degree. The thesis must make a contribution to knowledge and must afford evidence of originality either by the discovery of new facts or in the critical approach to facts already known. The literary presentation of the thesis must be satisfactory. Candidates will normally be required to present themselves for an oral examination, but if the thesis is of a sufficiently high standard the degree may be awarded without further examination.

22. The names of candidates who have been approved for the degree of Doctor of Medicine shall be published in alphabetical order; in cases of exceptional merit, the degree may, on the recommendation of the examiners, be awarded with distinction.

[See also the regulations on page 666.]

# REGULATIONS

## FOR DEGREES, DIPLOMAS AND CERTIFICATES IN MEDICINE AND SURGERY AND NURSING

### THE DEGREES OF BACHELOR OF MEDICINE AND BACHELOR OF SURGERY

[IMPORTANT NOTICE: *The Ordinance and regulations for the degrees of M.B., Ch.B., particularly those referring to the clinical period of the course, are at present being revised and the new Ordinance, regulations and schemes of study will be published in the Calendar for session 1965-66.*]

1. The scheme of study leading to the degree of M.B., Ch.B. may extend over six years but suitably qualified candidates may be exempted from the first year and be able to complete the course in five years.

Candidates should note that in order to qualify for admission to a scheme of study for a first degree in the University, they must satisfy both a *General Requirement* and a *Course Requirement*. For information regarding the *General Requirement*, for purposes of matriculation, candidates should write to The Secretary, Joint Matriculation Board, Manchester 15. The *Course Requirement* is set out below.

*Course Requirement*

*Six-year scheme:* for admission to the scheme passes in two approved subjects at advanced level are required. These passes should preferably be in physics and chemistry but passes may be in other subjects, including Arts subjects. Candidates must have a pass at ordinary level in mathematics and passes at ordinary level in physics and chemistry are desirable.

*For exemption from the first year of the scheme* passes in three approved subjects at advanced level are required.

*One* of these passes must be in chemistry.
The *second* must be in physics.
The *third* must be in either biology or zoology.
In addition a pass in mathematics at ordinary level is required.

2. During the first five years, a year of medical study which is to count as part of the degree course must include in each term attendance upon at least two of the prescribed courses of lectures or laboratory work, or upon one such course together with hospital practice. In the sixth year clinical work will suffice. The attendance must be given at the University or at a college, medical school or hospital recognised for this purpose by the University.

3. Candidates must present themselves for examination or re-examination

in all the subjects prescribed for any examination at the same time except as provided in regulations 4 and 8 below.

4. Candidates who failed (a) in any subject of the first examination or (b) in any subject of the second examination or (c) in any part of the third examination or (d) in any subject of the final examination may be exempted from re-examination in such subjects of the respective examinations as the appropriate examination committee may determine.

5. Candidates for the first examination are required to have attended approved courses at the University or at an institution recognised for this purpose by the University or to have attended, at some other institution, courses of instruction accepted as equivalent by the Senate.

6. The courses of instruction shall be as follows:

(a) Chemistry: lectures and laboratory work for at least three terms
(b) Physics: lectures and laboratory work for at least three terms
(c) Zoology: lectures and laboratory work for at least three terms

7. The first examination will be held in June. It will include laboratory work in each of the subjects listed in regulation 6(a), (b) and (c) above. Candidates who fail to satisfy the examiners in any subject of the examination in June may be granted permission by the Senate to present themselves for a supplementary examination in September.

8. Exemptions may be granted as follows:

(a) Candidates who have passed in chemistry, physics or zoology at the advanced level in a General Certificate of Education examination will be granted exemption from the courses and examinations in the same subject or subjects of the first examination.

(b) Candidates who have passed in biology at the advanced level in a General Certificate of Education examination will be granted exemption from the course and examinations in zoology of the first examination.

(c) Candidates who hold qualifications deemed by the Senate to be equivalent to the above may also be granted exemption.

9. A candidate who is exempted from one or more subjects of the first examination must take in his first year three or four courses and pass the prescribed examinations in three of them. At least one of these courses must be a course for the degrees of Bachelor of Medicine and Bachelor of Surgery, the remaining course or courses must be selected from Mathematics 1Z, medical sociology and other appropriate first-year courses in the University. The courses selected must be approved by the Dean.

10. Candidates will not be allowed to proceed with the courses in anatomy and physiology and biochemistry until they have passed or gained exemption from each of the subjects of the first examination and have passed the prescribed examinations, as required in regulation 9 above, in the subjects selected for study in the first year.

11. Candidates for the second examination are required to have attended courses of instruction in:

Anatomy, including embryology and histology and the dissection of the human body for a period extending over at least six terms.
Physiology for at least five terms, including laboratory instruction.
Biochemistry for at least six terms, including laboratory instruction.
Medical psychology for at least two terms.

12. Candidates will be required to present themselves for departmental examinations at the end of the first year in anatomy, physiology and biochemistry. The result of these examinations will be taken into account in assessing a candidate's progress.

Candidates who are judged to have failed to make sufficient progress may be required (a) to repeat the year, or (b) to withdraw from the University.

13. The second examination will be held in June.

Candidates who fail to satisfy the examiners may be permitted to present themselves for re-examination in September.

14. Candidates will not be allowed to proceed to clinical studies until they have passed the whole of the second examination.

15. The third, fourth and final examinations may be taken in any order provided that the final examination may not be taken until the third examination has been passed.

16. The third examination will be held in December, March and June*, five terms after commencing the study of pharmacology, pathology and bacteriology.

Candidates for part 1 of the third examination are required to have attended approved courses in pathology and bacteriology including laboratory work for a period extending over not less than five terms.

17. Candidates for part 2 of the third examination are required to have attended approved courses in pharmacology and pharmacy including laboratory work for a period extending over at least five terms.

18. The subjects of the third examination shall be:

Part 1 Pathology and bacteriology [candidates will be examined practically in bacteriology, pathological anatomy and histology]
Part 2 Pharmacology.

19. The fourth examination shall be held in June and December. Candidates will not be permitted to take the examination until they have completed a prescribed course of clinical study, and are required to have attended

(a) approved courses in forensic medicine and toxicology extending over a period of not less than three terms; and
(b) approved courses in public health extending over a period of not less than four terms.

20. The subjects of the fourth examination shall be:

Forensic medicine [including clinical toxicology] and
Public health.

* Parts 1 and 2 in December, part 1 (re-examination) in March, part 2 (re-examination) in June.

21. Candidates for the fourth examination who fail to satisfy the examiners must, before being admitted to re-examination, have pursued such further study as may have been required by the examination committee.

22. The final examination will be held in December and June and may not be taken until thirty-three months of clinical study have been completed.

23. Candidates for the final examination must have attended approved courses in the subjects in which they offer themselves for examination.

It is required

(a) in medicine

that they have attended courses in general medicine, pædiatrics, psychology and psychiatry, therapeutics, clinical pathology and other special branches of medicine extending over eight terms;

that they have held in a hospital approved by the University, the appointments of medical clerk for six months and of clerk in the department of pædiatrics for three months; and

that they have received clinical instruction in dermatology, infectious diseases, neurology, venereal diseases and psychiatry and have held clerkships in these subjects for such periods and in such manner as the Board of the Faculty of Medicine may from time to time determine;

(b) in surgery

that they have attended courses in general surgery, orthopædic surgery, ophthalmology, otology and other special branches of surgery extending over seven terms;

that they have held, in a hospital approved by the University, the appointment of general surgical dresser for six months; and

that they have received clinical instruction in casualty surgery, ophthalmology, orthopædic surgery, otology and other special branches of surgery and have held dresserships in these subjects for such periods and in such manner as the Board of the Faculty of Medicine may from time to time determine;

(c) in radiology that they have attended a course during one term;

(d) in anæsthetics that they have attended a course of instruction during one term and have received practical instruction in the administration of anæsthetics;

(e) in obstetrics that they have attended during not less than three months the indoor and outdoor practice of a lying-in hospital or the lying-in wards of a general hospital approved by the University and, subsequent to having acted as surgical dresser and medical clinical clerk, have personally conducted not less than twenty cases of labour, or such lesser number as may be approved;

(f) in gynæcology that they have attended a course of instruction during one term and have received during at least two months approved clinical instruction in either a general or a special hospital.

24. The subjects of the final examination shall be:

(a) Medicine, systematic and clinical, including therapeutics and the

special branches of medicine;
(b) Surgery, systematic, clinical and practical, including the special branches of surgery;
(c) Obstetrics and gynæcology, systematic, clinical and practical.
In each of these three subjects, candidates will not pass unless they satisfy the examiners in the clinical part of the examination.

25. In determining the award of Honours to candidates their performance in the second, third, fourth and final examinations will be considered.

26. Candidates who fail to satisfy the examiners in the final examination must, before being admitted for re-examination, have pursued such further study as may be required by the examination committee.

## THE DEGREE OF MASTER OF SURGERY

27. A graduate who wishes to be accepted as a candidate for the degree must apply to the Board of the Faculty of Medicine.*
He must submit:
(a) Documentary evidence that for at least three years since taking the degrees of Bachelor of Medicine and Bachelor of Surgery he has held appropriate training appointments in surgery at a recognised teaching hospital or similar institution and that he has acquired a satisfactory knowledge of the theoretical and practical aspects of surgery. Exceptionally, after consideration of the evidence submitted, the Board of the Faculty of Medicine may require an applicant to pass a qualifying examination in surgery which may be written, oral, clinical and practical.
(b) The title of the proposed thesis or published work, accompanied by a short outline (not exceeding 500 words) of the proposed or actual scope of the work and of the methods involved.

28. After being accepted and after the subject of the proposed thesis or published work has been approved by the Board of the Faculty of Medicine, a candidate must send to the Registrar an application to be examined, accompanied by three copies [printed or typewritten] of his thesis or published work, including illustrations. In the event of the degree being awarded, one copy of the thesis approved for the degree will be retained in the University library.

29. A candidate shall not be permitted to submit a thesis or published work for which a degree has already been conferred or which is under consideration for the award of a degree, in this or any other university; but he shall not be precluded from incorporating in his thesis any part of the work already submitted by him with a view to a degree for which he has been a successful candidate, provided that in his application he states his desire to do so and clearly indicates in due course the part of the work which has been so incorporated.

30. A candidate submitting work previously published under joint authorship shall be required to indicate to the satisfaction of the examiners his own share in the joint publication.

*Before making application to the Board of the Faculty of Medicine, such graduates are advised to consult the professor of surgery.

31. Applications must be made on a form to be obtained from the dean's office, School of Medicine, and must be accompanied by the prescribed examination fee of £50.

## THE DEGREE OF DOCTOR OF MEDICINE

32. Each candidate must submit the title of his thesis or published work for the approval of the Board of the Faculty of Medicine. The title must be accompanied by a short outline (between 400 and 500 words) of the proposed or actual scope of the work and of the methods involved.

33. Such approval having been obtained, a candidate must send to the Registrar an application to be examined accompanied by three copies [printed or typewritten] of his thesis or published work including illustrations. A copy of the thesis approved for the degree will be retained in the University library.

34. A candidate shall not be permitted to submit a thesis or published work for which a degree has already been conferred upon him or which is under consideration for the award of a degree in this or any other university.

35. A candidate submitting work previously published under joint authorship shall be required to indicate to the satisfaction of the examiners his own share in the joint publication.

36. The oral examination will in general be confined to the subject matter of the thesis or published work of the candidate.

37. Applications [see regulation 32] are to be made on a special form to be obtained from the dean's office, School of Medicine, and must be accompanied by a fee of £50.

38. Candidates will be informed within three months of the receipt of their thesis whether they will be required to attend for an oral examination; candidates required to attend will be given not less than six weeks' notice of the date of the examination.

## THE DIPLOMA IN PUBLIC HEALTH

39. The course for the diploma in public health shall extend over a period of not less than eighteen months of part-time study. The course will begin in the October of alternate years and the examination will be held in March at the end of the course and on one further occasion during the year.

40. A candidate must hold a registrable medical qualification and the part-time employment in which he proposes to engage during the period covered by the course must be approved by the University.

41. Instruction shall include:

(a) The history of public health and social welfare; the evolution of central and local authorities; and the evolution of the law in relation to public health administration.

(b) The existing functions of central and local authorities and voluntary organisations; the nature and objects of the public health and medical

services which they administer; the agencies for the relief of poverty and the promotion of social welfare.

(c) The administration, organisation and management of medical departments and institutions.

(d) Sanitation, water supplies, housing, town and country planning, and the application of scientific principles thereto. The interpretation of building plans.

(e) The influence on physical and mental health of environment, including housing and occupation, economic circumstances, nutrition and personal hygiene. Physiology and biochemistry in relation to health. Physical education in relation to health and efficiency.

(f) The influence of heredity on health.

(g) Bacteriology, parasitology and medical entomology as applied to epidemiology.

(h) Community aspects of disease. Administrative measures in relation to communicable and other diseases.

(i) Information relating to public health; nature, sources and numerical presentation. The presentation of statistical data in memoranda and scientific articles.

(j) The mental health services; social consequences of mental illness; mental deficiency.

(k) Methods of educating the public in the promotion and maintenance of health.

(l) After-care and rehabilitation.

(m) International health.

(n) Radiation hazards.

42. Every candidate shall produce evidence that he has

(a) resided and received instruction for four weeks in an approved hospital for infectious diseases

or (b) attended satisfactorily and regularly and received instruction at such an approved hospital for three months

or (c) served for not less than six months as a resident medical officer in such an approved hospital.

43. (a) Except as provided in 43 (b) below, a candidate must show to the satisfaction of the University

(i) that he has held a whole-time appointment for not less than twelve months in the health department of a local authority approved by the University, or

(ii) that he is holding a part-time appointment in such a department throughout any period during which he is receiving systematic instruction in the University, and is regularly supervised by appropriate officers of the authority;

and that his duties under the terms of his appointment under (i) or (ii) were, or are, such as to enable him to acquire a knowledge of public health practice and administration.

(b) A candidate who produces evidence to the satisfaction of the University that, by virtue of his holding or having held an appointment, or otherwise, he has obtained practical experience of health and welfare administration of a kind equivalent to that described in 43 (a) (i) or (ii) above may be exempted from the foregoing requirements.

44. No candidate shall be admitted to the examination for a diploma in public health until he has satisfactorily completed courses of instruction, in accordance with these regulations.

45. The examination shall include:

Five written papers, a clinical examination in infectious diseases and an oral examination. In addition, each candidate must present a dissertation on an approved subject.

46. The diploma may be awarded with distinction to a candidate whose work is adjudged to be of outstanding merit.

47. At the discretion of the examiners, a candidate may be referred for a year and may be required to repeat the whole or part of the courses before re-examination. Except with the permission of the Senate, a candidate will not be allowed to present himself for examination on more than three occasions.

## THE DIPLOMA IN PSYCHOLOGICAL MEDICINE

48. The examination for the diploma is in two parts, consisting of written, oral, practical and clinical tests of the candidate's proficiency.

49. Before being admitted to the first part of the examination, candidates must produce evidence:

(a) of having attended, after obtaining a registrable qualification, approved courses of instruction in the subjects of the examination over a period of two terms in the University

(b) of having acted as an assistant medical officer, locum tenens, house physician, or resident or whole-time clinical clerk, at a mental hospital or other institution approved by the University for this purpose, for a total period of not less than six months.

[The requirements of sub-paragraphs (a) and (b) above may be fulfilled concurrently.]

50. The subjects of study for the first part of the examination shall be:

(a) Psychology and the elements of the social sciences

(b) The anatomy, histology and embryology of the nervous system

(c) The physiology and biochemistry of nervous activity.

51. The examination for the first part will be held in March and June, and will consist of a written paper and an oral examination in each of the above subjects. Candidates must present themselves for the whole of the first part of the examination at the same time.

52. Before being admitted to the second part of the examination a candidate must have passed the first part of the examination and fulfilled the following requirements:

(a) He must show evidence of having completed not less than two years in the special study of psychological medicine, including:
  (i) Eighteen months of approved whole-time practice in mental hospitals or other institutions approved by the University where clinical instruction is given
  (ii) One term of approved practice in an institution for the mentally deficient where clinical instruction is given
  (iii) Three terms of approved practice in an out-patient or in-patient centre for the diagnosis and treatment of the psycho-neuroses and allied disorders where clinical instruction is given and in a centre for child guidance and child psychiatry where clinical instruction is given
  (iv) One term of approved clinical instruction in clinical neurology.

  [The requirements of sub-paragraph (a) (ii), (iii) and (iv) may be complied with during the tenure of the appointment under sub-paragraph (a)(i).]

(b) He must present evidence of having attended approved courses of instruction in the following subjects:
  (i) General psychiatry
  (ii) Neurology, including neuropathology
  (iii) Mental deficiency
  (iv) Psychopathology and psychotherapy
  (v) Child psychiatry
  (vi) Medico-legal psychiatry.

Courses of instruction may be taken concurrently with the tenure of clinical appointments.

53. Academic courses may be taken within the University. No course will be held unless a sufficient number of students has enrolled.

54. The second part of the examination to be held in June and December shall be in the subjects specified in regulation 52(b) and shall consist of two written papers, a clinical examination in neurology, a clinical examination in psychiatry, and an oral examination. Candidates must present themselves for the whole of the second part of the examination at the same time.

55. The conditions of admission and requirements of study may be modified by the Senate in the case of candidates who show evidence of prolonged study of, and training in, psychological medicine, or who have made original contributions of merit to psychiatric theory or practice; provided always that six months are spent in attendance upon prescribed courses within the University, and that no exemption will be granted from either part of the examination.

56. Application for admission to either course should be made by 15 July of the preceding session, and should be accompanied by a deposit of ten guineas. The applicant will be informed by 31 July whether or not the course in question is to be held; if it is not held the deposit will be returned.

57. Entries for parts I and II of the examination must be submitted upon the prescribed form not later than the dates given below:

Part I 1 February or 1 May for the March and June examinations respectively

Part II 1 May or 1 November for the June and December examinations respectively.

58. A list of the successful candidates in each part of the examination will be published in alphabetical order. The diploma may be awarded with distinction to a candidate whose work is judged to be of outstanding merit.

59. At the discretion of the examiners, a candidate may be referred for a year and may be required to repeat the whole or part of the courses before re-examination. Except with the permission of the Senate a candidate will not be permitted to present himself for either part of the examination on more than three occasions.

## CERTIFICATE IN PSYCHIATRIC SOCIAL WORK

60. Before entry upon the course leading to the certificate, candidates are required to produce evidence that they have graduated in sociology, psychology, social studies or allied subjects in a British university, or that they hold a diploma or certificate in social studies from a British university, or have other approved educational qualifications. They will also be required to produce such evidence of practical experience of social work as shall be judged to be sufficient.

61. Before admission to the examination for the certificate, candidates must produce evidence that they have satisfactorily attended in the University courses of instruction in the following subjects:

(*a*) Psychiatry, adult and child, and mental subnormality
(*b*) Psychology, social and applied
(*c*) Human growth and development
(*d*) Psychiatric social work
(*e*) Delinquency
(*f*) Social administration

and that they have satisfactorily completed a course of practical training by attendance at the appropriate departments of approved hospitals, clinics and other institutions.

Candidates who are able to produce evidence of having previously attended in this University courses of instruction equivalent to those enumerated in (*a*) to (*f*) above may on application to Senate be exempted from further attendance. In no case will exemption from examination be granted.

Senate reserves the right at any time to ask a student who is found to be unsuitable to withdraw from the course.

62. *Examination*

The following will be the subjects of examination:

1. General, social and child psychology
2. Psychiatry and mental subnormality

3. Social work
4. Social administration.

Students will be assessed throughout the course on their practical work and their written work. In assessing the results, the examiners may take into account the tutors' and the supervisors' estimates of the students' practical performance.

The examination takes place in June and re-examination in September. The certificate will be withheld until requirements in practical work have been satisfactorily completed.

If the student has satisfied the examiners in his theoretical subjects but not in his practical work, he need not repeat the theoretical courses or sit any further examination in those subjects.

If the student has failed to satisfy the examiners in practical work, he may, at the discretion of the examiners, be granted the certificate after completing a further period of practical work in an approved hospital or clinic.

It may be deemed necessary to request a student who has failed to satisfy the examiners in practical work to undertake a further period of training and in addition present himself for re-examination, in which event he must do so within a calendar year from the end of the session in which he failed to satisfy the examiners in practical work, unless Senate expressly agrees to extend this.

Last date of entry to June examination—31 March.
Last date of entry to September examination—20 July.

## THE DIPLOMA IN NURSING

63. Each candidate who satisfies the examiners shall receive a diploma and shall be styled a diplomate in nursing of the University of Leeds.

64. The diploma shall state in which section of part 2 of the examination the candidate has been successful.

65. Before a candidate can be accepted for the course, her name must appear in the general part of the register of nurses of the General Nursing Council of England and Wales, and after becoming state registered she must have gained four years' experience in the practice of nursing, one year of which must be experience in hospital or domiciliary nursing and one year in the branch of nursing selected as the subject of part 2 of the examination. Not more than two years of this experience may consist of attendance upon courses of instruction, or in appointments counted as training periods towards a further qualification in nursing.

66. Candidates must have obtained a school certificate or have passed at ordinary level in four subjects taken at the same time in a General Certificate of Education examination, one of these subjects being English language; or they must have passed a recognised public examination of at least equivalent standard.

67. Candidates must attend a part-time course of study in the University. The course will begin in October each year and will extend over three terms.

68. The subjects of the part-time course shall be as follows:
Medico-social legislation and administration, with special reference to nursing (50 hours)
Hygiene and communicable diseases [including bacteriology] (70 hours)
Human relationships in nursing practice and management (30 hours).

69. Application for admission to the course must be made by 31 July of the previous session. The course will not be held unless six or more students have enrolled.

70. The examination shall consist of two parts which may be taken separately or together. If taken separately part 1 must be passed before proceeding to part 2.

71. Part 1 of the examination shall consist of:
(a) Hygienic problems of disease, with special reference to communicable diseases (1 paper and an oral examination)
(b) Medico-social legislation and administration with special reference to nursing* (1 paper and an oral examination)
(c) Human relationships in nursing practice and management (1 paper and an oral examination).

Part 2 of the examination shall consist of:
(a) A written paper on the general principles of nursing
(b) Two written papers and a practical and/or oral examination in one of the special subjects listed below selected by the candidate:
(i) Clinical nursing
(ii) Public health nursing
(iii) Mental nursing.

## THE NURSE TEACHER'S CERTIFICATE

72. Before admission to the course for the nurse teacher's certificate candidates must produce evidence:
(a) That they are state registered nurses on the general part of the register who have had at least three years of post-registration experience in nursing and have held the post of ward sister in an approved hospital for at least one year
(b) That they have qualified for admission to a degree course in the University or hold the school certificate of one of the following bodies:
The Oxford and Cambridge Schools Examination Board
The Oxford Delegacy for Local Examinations
The Cambridge Local Examinations Syndicate
The University of London
The Northern Universities' Joint Matriculation Board
The University of Durham
The University of Bristol
The Central Welsh Board,
or have had education of a standard satisfactory to the University.

* Examination questions in this subject may relate specifically to the history of nursing.

73. Before admission to the examination for the certificate, candidates must produce evidence that they have satisfactorily attended courses at the University as follows:

First term
- Social economics [including duties of almoners] (20 hours)
- Elementary science (100 hours)
- Anatomy and histology (40 hours)
- Physiology [including general biology] (10 hours)
- Psychology (30 hours)
- Visits and excursions (20 hours)
- Nutrition and dietetics (30 hours)

Second term
- Anatomy and histology (10 hours)
- Physiology [including general biology] (40 hours)
- Bacteriology and pathology (20 hours)
- Hospital and nursing school administration (20 hours)
- Pharmacy and the administration of drugs (10 hours)
- History of education and principles of education (30 hours)
- Visits and excursions (20 hours)

Third term [including practical teaching in Easter vacation]
- Methods of teaching (20 hours)
- Hygiene and communicable diseases (40 hours)
- Child health (20 hours)
- Nursing history and development (10 hours)
- Teaching practice [with sister tutors] including Easter vacation (100 hours)

74. The examination shall consist of two parts. Part 1 must be passed before part 2 is taken.

Part 1 of the examination shall be held in March and June in the following subjects:

(a) Chemistry and physics: a written paper of two hours, and an oral examination
(b) Anatomy and histology: a written paper of two hours, and an oral examination
(c) Physiology including nutrition and dietetics: a written paper of two hours, and an oral examination
(d) Social economics: a written paper of two hours.

Part 2 of the examination shall be held in June and September in the following subjects:

(a) Pathology, bacteriology, hygiene and communicable diseases: a written paper of two hours, and an oral examination.
(b) Principles of education, methods of teaching and educational psychology: a written paper of two hours, and an oral examination
(c) Nursing school administration including history of nursing: a written paper of two hours and an oral examination.
(d) Practical examination in teaching.

75. The nurse teacher's certificate will be awarded to each candidate who has passed in both parts of the examination.

## HEALTH VISITORS' CERTIFICATE OF THE ROYAL SOCIETY FOR THE PROMOTION OF HEALTH

A course of study lasting one academic year is organised by the University; every candidate for the course must produce evidence that she is either a state registered nurse on the general part of the Register or a state registered childrens' nurse, and has also passed the first examination of the Central Midwives' Board for England and Wales, Scotland, Eire or an Bord Altranais Eire, or the Joint Nursing and Midwives' Council for Northern Ireland, or that her name has been entered on the Roll of Midwives of the Central Midwives' Board for England and Wales, Scotland, Eire or Northern Ireland.

A recognised three months' course of obstetric nursing will be accepted under the above regulation whether it is taken within, or subsequent to, general nurse training. Candidates must have obtained a General Certificate of Education or have attained a good standard of education.

Before admission to the examination a candidate must produce evidence in prescribed form that she has completed a course of training in public health work approved by the Ministry of Health lasting for at least six months.

The examination extends over a period of three days and consists of three written papers and an oral examination.

Each successful candidate who has complied with the regulations will be granted a certificate under the seal of the Royal Society of Health.

Detailed information about the course is available in the syllabus which may be obtained from the department of preventive medicine and public health, University of Leeds, 32 Hyde Terrace, Leeds 2.

# THE SCHOOL OF DENTISTRY

## ORDINANCE VII

### DEGREES IN DENTAL SURGERY

1. The degrees in dental surgery shall be:
Bachelor of Dental Surgery (B.Ch.D.)
Master of Dental Surgery (M.Ch.D.)
Doctor of Philosophy (Ph.D.)

### THE DEGREE OF BACHELOR OF DENTAL SURGERY

2. All candidates for the degree of Bachelor of Dental Surgery are required to present certificates showing that they will have attained the age of twenty-one years on the day of graduation, and that they have attended courses of instruction approved by the University extending over not less than five years, two of such years at least having been passed in the University subsequent to the date of passing, or being exempted from, the first examination, and to have completed such periods of hospital attendance as may be prescribed by the regulations of the University.

3. Before entering upon courses for the degree of Bachelor of Dental Surgery, candidates must have satisfied the requirements for entry upon a degree course as laid down by the Joint Matriculation Board of the Universities of Manchester, Liverpool, Leeds, Sheffield and Birmingham.

4. To qualify for the degree of Bachelor of Dental Surgery, candidates must satisfy the examiners in the first, second, third and final examinations.

5. Before presenting themselves for any of the examinations candidates are required to furnish evidence of having attended courses of instruction in accordance with the regulations of the University.

6. The first examination shall consist of three subjects:
Chemistry, physics and zoology.

7. The second examination shall consist of four parts:
Part 1 Anatomy, physiology
Part 2 Dental anatomy and physiology
Part 3 Dental mechanics and the properties of dental materials
Part 4 Chemistry and physics of dental materials.

8. Before presenting themselves for the second examination, candidates must have passed or been exempted from the first examination.

9. The third examination shall consist of three parts:
Part 1 General pathology and bacteriology
Part 2 Pharmacology and therapeutics
Part 3 Medicine, surgery.

10. Candidates, before presenting themselves for the third examination, must have passed the second examination.

11. The final examination shall consist of three subjects:
Dental surgery
Clinical dental surgery including conservative dentistry, ora surgery orthodontics, radiology and prosthetics
Special pathology and bacteriology.

12. Before presenting themselves for the final examination candidates must have passed the third examination.

13. Distinction may be awarded in the second examination in parts 2, 3 and 4 and in the individual subjects of part 1; in the third examination in parts 1 and 2 and in the individual subjects of part 3; and in the individual subjects of the final examination.

14. Candidates who have satisfied the examiners in all the subjects of the final examination may be awarded
(a) the degree of Bachelor of Dental Surgery with first-class Honours
(b) the degree of Bachelor of Dental Surgery with second-class Honours
(c) the degree of Bachelor of Dental Surgery.

15. The names of successful candidates in all examinations except the final examination and in each group of the final examination shall be published in alphabetical order.

[See also the regulations on page 677]

## THE DEGREE OF MASTER OF DENTAL SURGERY

16. The degree of Master of Dental Surgery may be conferred, on payment of the proper fee, upon Bachelors of Dental Surgery of the University and upon graduates in dental surgery of other approved universities, subject to the conditions contained in the following articles.

17. Bachelors of Dental Surgery of the University of not less than two years' standing may proceed to the degree of Master of Dental Surgery upon completion of an approved course of higher study or research extending over a period of two years.

18. Graduates in dental surgery of other approved universities of not less than two years' standing may proceed to the degree of Master of Dental Surgery upon completion of an approved course of higher study or research in the University extending over a period of two years.

19. Candidates having satisfied the requirements under either article 17 or article 18 may proceed to the degree either (a) by examination only or (b) by presenting a thesis or published work on a subject or subjects approved by the Board of the Faculty of Medicine and present themselves in addition for such examinations as may be deemed necessary.

[See also the regulations on page 679]

## THE DEGREE OF DOCTOR OF PHILOSOPHY

[The degree of Doctor of Philosophy is governed by Ordinance II, articles 50 to 52 and relevant regulations which are set out on pages 299 and 310.]

# REGULATIONS

## FOR DEGREES AND FOR THE DIPLOMA IN DENTAL SURGERY

### THE DEGREE OF BACHELOR OF DENTAL SURGERY

1. The scheme of study leading to the degree of B.Ch.D. may extend over five and a half years but suitably qualified candidates may be exempted from the first year and be able to complete the course in four and a half years.

Candidates should note that in order to qualify for admission to a scheme of study for a first degree in the University, they must satisfy both a *General Requirement* and a *Course Requirement*. For information regarding the *General Requirement*, for purposes of matriculation, candidates should write to The Secretary, Joint matriculation Board, Manchester 15. The *Course Requirement* is set out below.

*Course Requirement*

*Five and a half year scheme:* for admission to the scheme passes in two approved subjects at advanced level are required. These passes may be in any subject, including Arts subjects. In addition a pass in mathematics at ordinary level is required.

*For exemption from the first year of the scheme* passes in three approved subjects at advanced level are required.

*One* of these passes must be in chemistry.

The *second* must be in physics.

The *third* must be in either biology or zoology.

In addition a pass in mathematics at ordinary level is required.

2. Candidates must present themselves for examination or re-examination in all the subjects prescribed for any examination or part thereof at the same time except as provided in regulations 3 and 7 below.

3. Candidates who have failed in a subject of (a) the first examination or (b) part 1 of the second examination or (c) part 3 of the third examination or (d) the final examination may be exempted from re-examination in such subjects of the respective examinations as the Board of the Faculty of Medicine may determine.

4. Candidates for the first examination are required to have attended approved courses at the University or at an institution recognised for this purpose by the University, or to have attended at some other institution courses of instruction accepted as equivalent by the Senate.

5. For the first examination, the courses of instruction shall be as follows:

(a) Chemistry: lectures and laboratory work for three terms

(b) Physics: lectures and laboratory work for three terms

(c) Zoology: lectures and laboratory work for three terms.

6. The first examination will be held in June each year. It will include laboratory work in each of the subjects listed in regulation 5(a), (b) and (c) above. Candidates who fail to satisfy the examiners in any subject of the

examination in June may be granted permission by the Senate to present themselves at a supplementary examination in September.

7. Exemptions may be granted as follows:
   (a) candidates who have passed at the advanced level in chemistry or physics or zoology in a General Certificate of Education examination may be granted exemption from the courses and examinations in the same subject or subjects of the first examination
   (b) candidates who have passed at the advanced level in biology in a General Certificate of Education examination will be granted exemption from the course and examination in zoology of the first examination
   (c) candidates who hold qualifications deemed by the Senate to be equivalent to the above may also be granted exemption.

8. Candidates will not be allowed to proceed with the courses in anatomy and physiology and biochemistry until they have passed, or gained exemption from, the whole of the first examination.

9. Candidates for parts 1 and 2 of the second examination are required to have attended courses including lectures and practical work in: anatomy for three terms, and histology for two terms; physiology and biochemistry for three terms; dental anatomy and physiology for two terms; dental histology for two terms with laboratory instruction.

10. Parts 1 and 2 of the second examination will be held in June. Candidates who fail to satisfy the examiners may be permitted to present themselves for re-examination in September, but before doing so must pursue such further study as may be required by the Board of the Faculty of Medicine.

11. Candidates will not be allowed to proceed to their clinical studies until they have passed part 1 of the second examination.

12. Candidates for parts 3 and 4 of the second examination are required to have attended courses in chemistry and physics of dental materials for three terms; dental mechanics and properties of dental materials for three terms with laboratory instruction; dental prosthetics for one term; and clinical practice for six months.

13. Parts 3 and 4 of the second examination will be held in June. Candidates who fail to satisfy the examiners may be permitted to present themselves for re-examination in September, but before doing so must pursue such further study as may be required by the Board of the Faculty of Medicine.

14. Candidates will not be allowed to proceed to the courses for the third and final examinations until they have passed part 3 of the second examination.

15. Candidates for part 1 of the third examination are required to have attended courses including lectures and practical work in general pathology and bacteriology for three terms; and are required to have held, in a hospital approved by the University, a post-mortem clerkship for three months.

16. Part 1 of the third examination will be held in June. Candidates who fail to satisfy the examiners may be permitted to present themselves for re-examination in September, but before doing so must pursue such further study as may be required by the Board of the Faculty of Medicine.

17. Candidates for part 2 of the third examination are required to have attended a course in pharmacology and therapeutics covering two terms.

18. Part 2 of the third examination will be held in March. Candidates who fail to satisfy the examiners may be permitted to present themselves for re-examination in September, but before doing so must pursue such further study as may be required by the Board of the Faculty of Medicine.

19. Candidates for part 3 of the third examination are required to have attended courses in: medicine for two terms with clinical instruction; surgery for two terms with clinical instruction; and to have pursued courses in clinical dental surgery for at least one year.

20. Part 3 of the third examination will be held in December. Candidates who fail to satisfy the examiners may be permitted to present themselves for re-examination in June, but before doing so must pursue such further study as may be required by the Board of the Faculty of Medicine.

21. Candidates for the final examination are required to have passed the second and third examinations; to have attended courses of instruction in operative technique for six months; the physical principles of radiology and radiological protection for one term; radiology for one term; clinical dental radiology for one term; applied anatomy and histology for one term; anæsthetics for one term; special pathology and bacteriology for two terms; conservative dentistry for two terms; periodontology for two terms; children's and preventive dentistry for two terms; orthodontics for two terms; law and ethics of dental practice for one term; general dental practice for one term; public dentistry for one term; oral surgery for three terms; clinical dental surgery for two and a half years; and to have attended for at least three years the practice of an approved dental hospital or of the dental department of an approved general hospital.

22. The final examination will be held in March. Candidates who fail to satisfy the examiners may be permitted to present themselves for re-examination in September, but before doing so must pursue such further study as may be required by the Board of the Faculty of Medicine.

23. In determining the award of Honours to candidates their performance in parts 1, 2 and 3 of the second examination and in the third and final examinations will be considered.

## THE DEGREE OF MASTER OF DENTAL SURGERY

24. Candidates desiring to proceed to the degree by examination must present themselves for an examination in the principles and practice of dental surgery and in a special subject selected from the following list:

Embryology, histology and anatomy in relation to dentistry
Physiology and biochemistry in relation to dentistry
Pathology and bacteriology in relation to dentistry
Pharmacology, pharmacy and therapeutics in relation to dentistry
Properties of dental materials
Dental prosthetics
Dental radiology
Orthodontics

Oral surgery
Periodontology
Preventive dentistry

25. The examination in the principles and practice of dental surgery shall consist of:

(a) Two written papers
(b) A written commentary upon a selected case or cases
(c) A clinical or practical examination, or both
(d) A *viva voce* examination.

26. The examination in a special subject shall consist of:

(a) Two written papers
(b) A clinical or practical examination, or both
(c) A *viva voce* examination.

27. Candidates will not be allowed to proceed with the sections of the examination specified in regulations 25(b), (c) and (d) and 26(b) and (c) unless they have satisfied the examiners in the written papers specified in regulations 25(a) and 26(a) above.

28. Candidates desiring to proceed to the degree by thesis or published work must submit the title of the thesis or published work for the approval of the Board of the Faculty of Medicine and, such approval having been obtained, must furnish three copies [printed or typewritten] together with any drawings or specimens which are deemed necessary for illustrating them.

29. The thesis to be presented shall embody the results of personal observation or original research either in some branch of dental surgery or in some science directly related thereto. Original work already published by the candidate shall be admissible in lieu of, or in addition to, a thesis specially written for the degree.

30. Candidates may be examined on the subject of the thesis or may be required to present themselves for such examinations as may be deemed necessary.

31. If the thesis or published work submitted is considered by the examiners to be of exceptional merit the degree may be awarded without further examination.

32. A candidate shall not be permitted to submit a thesis or published work for which a degree has already been conferred upon him, or which is under consideration for the award of a degree, in this or any other university, but he shall not be precluded from incorporating in his thesis or published work any part of the work already submitted by him with a view to a degree, provided that in his application for acceptance as a candidate for the degree he states his desire to do so, and, on presentation of his thesis or published work, indicates clearly the part which has been so incorporated.

33. In the case of work submitted under joint authorship, the applicant shall be required to indicate to the satisfaction of the Senate his own share in the joint production.

34. A copy of the thesis submitted in support of the application will be retained in the University library.

35. The names of candidates who have been approved for the degree of Master of Dental Surgery shall be published in alphabetical order and distinction may be awarded on the recommendation of the examiners.

36. Application for examination must be made on the appropriate form and submitted to the Registrar of the University not later than 1 January or 1 July in any year.

## THE DIPLOMA IN DENTAL SURGERY

37. Except with the special permission of the Senate, given on the recommendation of the Board of the Faculty of Medicine, the course for the diploma in dental surgery will only be available to those who are directed to the course by the Head of the Dental School.

38. All candidates for the diploma in dental surgery (L.D.S.) are required to present certificates showing that they will have attained the age of twenty-one years on the day of award, and that they have attended courses of instruction approved by the University extending over not less than four years, two of such years at least having been passed in the University subsequent to the date of passing the first examination, and to have completed such periods of hospital attendance as may be prescribed by the regulations of the University.

39. Before entering upon courses for the diploma in dental surgery candidates must have satisfied the requirements for entry upon a degree course as laid down by the Joint Matriculation Board of the Universities of Manchester, Liverpool, Leeds, Sheffield and Birmingham.

40. Unless specially exempted by the Senate, candidates for the diploma in dental surgery are required to present evidence of possessing a knowledge of mathematics equivalent to that of ordinary level in a General Certificate of Education examination.

41. To qualify for the diploma in dental surgery, candidates must satisfy the examiners in the first, second, third and final examinations.

42. Candidates must present themselves for examination or re-examination in all the subjects prescribed for any examination or part thereof at the same time except as provided in regulations 43 and 48 below.

43. Candidates who have failed in a subject of (a) the first examination or (b) part 1 of the second examination or (c) part 3 of the third examination or (d) the final examination may be exempted from re-examination in such subjects of the respective examinations as the Board of the Faculty of Medicine may determine.

44. The first examination shall consist of three subjects:

Chemistry, physics and zoology.

Before presenting themselves for the first examination candidates are required to furnish evidence of having attended courses of instruction in accordance with the regulations of the University.

45. Candidates for the first examination are required to have attended approved courses at the University or at an institution recognised for this purpose by the University, or to have attended at some other institution courses of instruction accepted as equivalent by the Senate.

46. For the first examination, the courses of instruction shall be as follows:
(a) Chemistry: lectures and laboratory work for three terms
(b) Physics: lectures and laboratory work for three terms
(c) Zoology: lectures and laboratory work for three terms.

47. The first examination will be held in June each year. It will include laboratory work in each of the subjects listed in regulation 46(a), (b) and (c) above. Candidates who fail to satisfy the examiners in any subject of the examination in June may be granted permission by the Senate to present themselves at a supplementary examination in September.

48. Exemptions may be granted as follows:
(a) candidates who have passed at the advanced level in chemistry or physics or zoology in a General Certificate of Education examination may be granted exemption from the courses and examinations in the same subject or subjects of the first examination
(b) candidates who have passed at advanced level in biology in a General Certificate of Education examination will be granted exemption from the course and examination in zoology of the first examination
(c) candidates who hold qualifications deemed by the Senate to be equivalent to the above may also be granted exemption.

49. Candidates will not be allowed to proceed with the courses in anatomy and physiology and biochemistry until they have passed, or gained exemption from, the whole of the first examination.

50. The second examination shall consist of four parts:
Part 1 Anatomy, physiology
Part 2 Dental anatomy and physiology
Part 3 Dental mechanics and the properties of dental materials
Part 4 Chemistry and physics of dental materials.

51. Before presenting themselves for the second examination candidates must have passed or have been exempted from the first examination.

52. Candidates for parts 1 and 2 of the second examination are required to have attended courses including lectures and practical work: anatomy for three terms, and histology for two terms; physiology and biochemistry for three terms; dental anatomy and physiology for two terms; dental histology for two terms with laboratory instruction.

53. Parts 1 and 2 of the second examination will be held in June. Candidates who fail to satisfy the examiners may be permitted to present themselves for re-examination in September, but before doing so must pursue such further study as may be required by the Board of the Faculty of Medicine.

54. Candidates will not be allowed to proceed to their clinical studies until they have passed part 1 of the second examination.

55. Candidates for parts 3 and 4 of the second examination are required to have attended courses in: chemistry and physics of dental materials for three terms; dental mechanics and the properties of dental materials for three terms with laboratory instruction; dental prosthetics for one term; and clinical practice for six months.

56. Parts 3 and 4 of the second examination will be held in June. Candidates who fail to satisfy the examiners may be permitted to present themselves for re-examination in September, but before doing so must pursue such further study as may be required by the Board of the Faculty of Medicine.

57. Candidates will not be allowed to proceed to the courses for the third and final examinations until they have passed part 3 of the second examination.

58. The third examination shall consist of three parts:

Part 1 General pathology and bacteriology
Part 2 Pharmacology and therapeutics
Part 3 Medicine and surgery.

59. Before presenting themselves for the third examination candidates must have passed the second examination and are required to furnish evidence of having attended courses of instruction in accordance with the regulations of the University.

60. Candidates for part 1 of the third examination are required to have attended courses including lectures and practical work in general pathology and bacteriology for three terms; and are required to have held, in a hospital approved by the University, a post-mortem clerkship for three months.

61. Part 1 of the third examination will be held in June. Candidates who fail to satisfy the examiners may be permitted to present themselves for re-examination in September, but before doing so must pursue such further study as may be required by the Board of the Faculty of Medicine.

62. Candidates for part 2 of the third examination are required to have attended a course in pharmacology and therapeutics covering two terms.

63. Part 2 of the third examination will be held in March. Candidates who fail to satisfy the examiners may be permitted to present themselves for re-examination in September, but before doing so must pursue such further study as may be required by the Board of the Faculty of Medicine.

64. Candidates for part 3 of the third examination are required to have attended courses in: medicine for two terms with clinical instruction; surgery for two terms with clinical instruction; and to have pursued courses in clinical dental surgery for at least one year.

65. Part 3 of the third examination will be held in December. Candidates who fail to satisfy the examiners may be permitted to present themselves for re-examination in June, but before doing so must pursue such further study as may be required by the Board of the Faculty of Medicine.

66. The final examination shall consist of three subjects: dental surgery; clinical dental surgery including conservative dentistry, oral surgery, orthodontics, radiology and prosthetics; and special pathology and bacteriology.

67. Candidates for the final examination are required to have passed the third examination, to have attended courses of instruction in operative technique for six months; the physical principles of radiology and radiological protection for one term; radiology for one term; clinical dental radiology for one term; applied anatomy and histology for one term; anæsthetics for one term; special pathology and bacteriology for two terms; conservative dentistry for two terms; periodontology for two terms; children's

and preventive dentistry for two terms; orthodontics for two terms; law and ethics of dental practice for one term; general dental practice for one term; public dentistry for one term; oral surgery for three terms; clinical dental surgery for two years; and to have attended for at least two and a half years the practice of an approved dental hospital or of the dental department of an approved general hospital.

68. The final examination will be held in September. Candidates who fail to satisfy the examiners may be permitted to present themselves for re-examination in March, but before doing so must pursue such further study as may be required by the Board of the Faculty of Medicine.

69. Distinction may be awarded in the second examination in parts 2, 3 and 4 and in the individual subjects of part 1; in the third examination in parts 1 and 2 and in the individual subjects of part 3; and in the individual subjects of the final examination.

70. The names of candidates who have satisfied the examiners in the first, second, third and final examinations shall be published in alphabetical order.

71. The diploma in dental surgery (L.D.S.) may be awarded to those candidates for the degree of Bachelor of Dental Surgery (B.Ch.D.) who fail in the final examination, but who have attained a sufficiently high standard in that examination to qualify for the award of the diploma.

# THE DEPARTMENT OF
# ADULT EDUCATION
# AND
# EXTRA-MURAL STUDIES

The Department offers to people residing in the extra-mural area of the University, which includes most of the West and North Ridings of Yorkshire and the county boroughs situated in them, two main kinds of facilities in the field of further education.

The first is that of University tutorial classes and preparatory tutorial classes promoted by the University jointly with the Workers' Educational Association through the joint tutorial classes committee. These are classes planned to extend over three winter sessions of twenty-four meetings of two hours each in liberal studies such as English literature, history, philosophy, psychology, economics, political theory and certain of the natural sciences such as botany, biology and geology. Preparatory tutorial classes extend over one session, and are intended to be followed by full tutorial classes in the same or a related subject. All these classes are conducted either by full-time staff tutors specially appointed for this work, or by other members of the University's staff, or by tutors specially approved by the University. The courses are intended to provide a systematic survey of the subject being studied, and students are required, in addition to attending the meetings, to do reading and essay work at home under the direction of the tutor. No charge is made for tuition, but a small fee is payable in order to meet local expenses. Books from the library of the department are available for the use of the students in the classes.

The second kind of facility offered by the department is the provision of extension courses, given by full-time staff tutors specially appointed for this work, or by other members of the University staff. The extension courses are provided for students not associated with the Workers' Educational Association, and may be in any of the subjects taught by the University intra-murally, including technological subjects. Many of them are of an advanced or 'refresher' character, for students who already have a good knowledge of the subject, but wish to keep in touch with recent developments and research. A university extension course may vary in length from four to seventy-two meetings; the longer courses extend over three winter sessions, while the shorter ones may be confined to a weekend or a week and be provided on a residential basis. The subjects offered include liberal studies, mentioned in the previous paragraph, and courses of a vocational or semi-vocational kind. In science or technology, the courses arranged are again comparable in standard of work with what is required inside the University. For classes of a non-vocational kind a small fee is charged and paid to the University. In vocational courses, either the organisation requesting them, or the individuals attending, are normally expected to

bear the whole cost. Persons attending extension courses of at least three sessions' duration may obtain a University extension certificate, if the courses in question have been recognised for the award.

A further facility offered by the department is restricted to persons in Her Majesty's forces, and the bulk of this work is centred in Catterick Camp. The University has assumed responsibility throughout the extra-mural area for devising courses of study which are in accord with the traditions and views of the kind of teaching which is appropriate for universities to provide.

The department provides, in association with the Probation Division of the Home Office, a year's course for the training of probation officers, and is also associated with the staff courses at the Prisons' Service Staff College, Wakefield. Also within the department is the Nuffield Centre for Hospital and Health Service Studies, which provides short in-service courses for hospital administrators and longer courses under a regional scheme for the selective recruitment and training of hospital administrators.

## ALBERT MANSBRIDGE COLLEGE

The University has opened an adult residential college, Albert Mansbridge College, for the management of which the department is responsible.

A former hall of residence, Woodsley Hall, has been converted to provide seminar rooms, a lecture theatre, a departmental library, full catering facilities and a residential wing of forty study bedrooms.

The College houses the Nuffield Centre for Hospital and Health Service Studies and provides for residential courses conducted by the department or organised in conjunction with other departments of the University.

## THE EXTENSION CERTIFICATE

Persons attending extension lecture courses of three or more sessions' duration may obtain a university extension certificate. The regulations governing the award of the certificate are as follows:

1. Students in certain extension classes may be granted a university extension certificate. To obtain the certificate students must have been members of an extension class meeting for at least 40 hours in each of three or more academic sessions and must have:

   (a) attended not less than 75 per cent of the meetings in each session
   (b) done such other work as the tutor has required of them
   (c) passed an examination at the end of the course

2. The certificate shall be endorsed for the subject of the course.

3. A mark of distinction may be awarded on the result of the examination.

4. A candidate who fails in the examination shall have one opportunity to re-sit that examination at a later date.

## THE EXTENSION ADVANCED CERTIFICATE

1. The university extension advanced certificate is awarded to students who pursue an approved course of study and pass the examination prescribed. The minimum age of entry to the course is normally twenty-one years.

2. Candidates for an advanced certificate are required to join a university extension advanced course which meets for at least forty hours and to attend regularly (i.e. at least 75 per cent of the class meetings in each session) throughout the course. The advanced certificate will be awarded to students who have satisfied the examiners and have obtained satisfactory reports on class work and such other work as may have been required.

3. An advanced course, being distinct from a continued course of study, may be instituted only for students of proved ability for that particular course who have worked satisfactorily for at least three years beforehand in a related subject or in the same general field.

4. A candidate who fails in any paper or test in the examination shall be required to repeat the whole of the examination at any supplementary examination, unless the marks obtained in that part of the examination in which the candidate has satisfied the examiners are deemed by the committee of examiners to justify exemption from this requirement.

5. A candidate who fails more than once in any part of the examination shall not be permitted to re-sit the examination.

6. The advanced certificate shall be endorsed for the subject of study.

7. A mark of distinction may be awarded for work of exceptional merit.

8. Names of successful candidates shall be published in alphabetical order.

# THE INSTITUTE OF EDUCATION

The objects, functions and organisation of the Institute of Education which began its work in 1948 are set out in ordinance XXVIII [see pages 49 to 55].

Full-time initial training courses for graduates and non-graduates are provided in the University department of education and the constituent colleges, and details of syllabuses, etc. are given in the handbook obtainable from the secretary of the Institute. The Institute is the body responsible for examining students in training in the area, for awarding an initial certificate in education to those who complete their course successfully, and for recommending students to the Ministry of Education for recognition as qualified teachers.

For teachers of experience who wish to undertake further educational studies the Institute has established a number of courses leading to diplomas. These normally involve full-time study at the University for one year.

The Institute library, consisting of works on education and allied subjects, is open for use each day by the students and staffs of the University and colleges as well as by teachers in schools. A system of postal borrowing has been organised for those who are unable to attend at the library in person. The Institute is also building up a limited collection of school text books, film strips and gramophone records for educational work.

The lecturing staff of the Institute is available for giving lectures and conducting classes for students of education and practising teachers thoughout the area. The Institute arranges numerous courses and lectures, day, evening and residential, for practising teachers. These are held in Leeds and in various centres in the region, and cover a wide range of subjects.

A senior research fellowship has been established in the Institute since 1949. A second research fellowship is also offered for a research worker visiting the United Kingdom and already assured of an income for the period of his visit. The Institute also sets aside money each session for the award of grants not exceeding £100 each to help educationists throughout the area in investigations and researches whether in this country or abroad. Grants have been made to members of the staffs of colleges and University departments and to serving teachers in the region.

# SCHOLARSHIPS, FELLOWSHIPS AND PRIZES

## INTRODUCTORY

"The University may from time to time found and endow fellowships, scholarships, exhibitions and other prizes for which funds or property may by bequest, donation, grant or otherwise be provided and may make regulations respecting the same and the tenure thereof. . . ." [Extract from clause 23 of the Charter of the University.]

The foundations and endowments fall generally into the following categories:

1. Entrance scholarships for award to new students
2. Senior scholarships for award to undergraduate students after one or more years at the University
3. Graduate studentships
4. Fellowships
5. Prizes and medals
6. Financial grants and interest-free loans;

and they derive in very large part from the generosity and support of many benefactors, both individual and corporate.

All University awards are held subject to compliance with the general and specific regulations set out in the following pages.

Unless otherwise stated all applications for entrance scholarships must be made in writing before 31 January in the calendar year in which entry is intended. No official entry form is required. Application for award of an entrance scholarship does not obviate the need for separate application for admission to the University. Applications for graduate studentships and fellowships must, unless otherwise stated, be made before 1 June.

## GENERAL REGULATIONS

1. No election to a scholarship, studentship or fellowship will take place unless the candidate has attained a sufficient standard of merit. A candidate who has attained such standard may, if the Senate think fit, be elected to hold an award without emolument.

2. All awards are held subject to the good behaviour of the holder. The University reserves the power to determine the tenure of an award for irregularity in attendance at lectures, or for any other sufficient cause. The holder

of an award who fails in any University examination for which he prepares in the University, or who is reported unsatisfactory in the aggregate of his terminal examinations during the session, will forfeit his award, unless his retention of it be specially allowed.

3. Scholars, students and fellows shall devote the whole of their time to their academic work and, except as indicated below, shall not undertake any remunerative employment during the period of tenure. Acceptance of paid employment outside the University unless with the approval of the Vice-Chancellor will involve the surrender of the award. Exceptions from this rule may be made for students engaged upon technological or professional studies provided that, in each case, the Senate is satisfied that adequate cause has been shown for such exception and approves the arrangements.

4. The Senate reserves power to declare any award vacant or to reduce its value on the ground that the holder has previously or subsequent to his election acquired another award.

5. Students who are preparing for University degrees are required to present themselves for the degree examinations of the University of Leeds and are not allowed, except by the special permission of the Senate, to present themselves for the examinations of any other university.

## THE FRANK PARKINSON FUND

In 1936 Mr. Frank Parkinson, a former student and Baines scholar gave to the University the sum of £50,000 to endow a scholarship fund. In announcing his gift, he stated that he had " long cherished the ambition to do something to ensure that the kind of assistance which was extended to me as a student should be available to a large number of Yorkshire students, and especially those who might otherwise be unable to contemplate a University career, or who, in spite of proved ability, might be unable to carry on postgraduate research work through lack of means."

The income from the fund amounts to approximately £2,100 a year. It is intended to assist (1) persons of proved ability who are in need of financial help to enter upon or to continue their studies at the University; (2) distinguished graduates of the University who wish to pursue research, further study or a course of postgraduate training and who are unable to do so without financial help.

The fund is administered by a committee set up by the Senate which includes in its membership representatives nominated by the Council. The procedure of the committee is governed by regulations made by the Senate and approved by the Council and by Mr. Parkinson.

The monetary value and number of the fellowships, scholarships, exhibitions or grants awarded to individual candidates will vary according to circumstances.

## REGULATIONS FOR AWARDS FROM THE FRANK PARKINSON FUND

The following regulations apply to all candidates:

1. Beneficiaries under the fund must be born of British parents who have been domiciled in Yorkshire for a period of not less than ten years. The years of domicile need not be successive but must amount to ten in the aggregate.

2. All candidates must supply proof of eligibility in respect of the British nationality and Yorkshire domicile of parents.

3. Parents or guardians of candidates will be required to furnish a confidential statement of their financial position with such evidence in support as the committee may deem desirable.

4. Candidates must give references as to character from not less than two persons who shall not be relatives of the candidate. They must furnish a written personal statement concerning their general interests and activities including sports, their proposed course of study and their intended career after completing their studies.

5. Candidates are informed that in making the awards the committee will not only take into consideration intellectual and scholastic attainments and ability but will also attach the greatest importance to qualities of character, personality and promise of leadership.

6. The amount of the fellowships, scholarships or grants will normally be determined with due regard to the needs and means of the successful candidates. The scope of the fund will not be limited to the payment of fees and the provision of books and other necessary equipment but will, in appropriate cases, be extended to include the maintenance or part maintenance of the successful candidate.

7. The awards will be made after interview of a selected number of candidates, who shall be required to attend at the University for this purpose.

## ADDITIONAL REGULATIONS GOVERNING ENTRANCE AWARDS AND SENIOR AWARDS HELD BY UNDERGRADUATES

1. Successful candidates will normally be expected to pursue a course as whole-time students proceeding to a degree or diploma.

2. Candidates of proved ability and promise who do not desire to take a degree or diploma but wish to attend the University as whole-time students for one or two years may apply for assistance if otherwise eligible.

3. Candidates desiring to enter the University must supply evidence of intellectual qualifications including the results of any public examinations they have taken. In the case of undergraduates, the results of any University examinations will be taken into account.

4. All candidates included in this section must supply information regarding their school careers, together with a statement from the head of the school in which they spent the last three years of school life. Candidates engaged in a profession, business or industry should also supply evidence of their experience supported by a letter of recommendation from the employer.

5. Scholarships and exhibitions of varying amounts will be awarded each year.

6. Entrance scholarships will normally be awarded for three years. The continuation of the scholarship each year after the first will be subject to a satisfactory report on the work of the scholar in the previous year.

In the case of undergraduates already in residence at the University, scholarships will normally be awarded for one year in the first instance but may be renewed for a second year.

## REGULATIONS GOVERNING AWARDS TO POSTGRADUATE STUDENTS

1. Fellowships, studentships or grants will normally be made for a period of one year and may be renewed for a further period not exceeding two years, subject to a satisfactory report at the end of each year.

2. The research or further study may be carried out either in the University or in other approved universities or institutions.

3. Grants will normally be made to enable candidates to undertake research but they may also be awarded to candidates who wish to prepare themselves by a course of training for an administrative or professional career.

4. In selecting candidates the committee will have regard to the performance of candidates at the degree examinations and the reports of heads of departments.

# REGULATIONS FOR ENTRANCE SCHOLARSHIPS

1. The University has ceased to award entrance scholarships from the following funds, save in exceptional circumstances:

Frank Parkinson Fund
Boothman Scholarships
William Arthur Crabtree Scholarships.

2. 'Exceptional circumstances' include the case of an outstanding candidate who may not have support from any other source.

3. Awards from the following funds are at present under consideration and, for the time being, applications will be considered only from candidates who qualify under paragraph 2 above:

Edward Baines Scholarships
Benjamin Bland Scholarship
James Graham Memorial Scholarship
Matthews Scholarship in Colour Chemistry and Dyeing
Clothworkers Scholarships.

4. Examinations will not be held for entrance scholarships except for the Blanche Leigh Scholarship in music.

5. Application for any of the entrance scholarships should be made as indicated in the relevant regulations; application must also be made for admission to the appropriate scheme of study in the University.

## *The Edward Baines Scholarships*

1. The Edward Baines scholarships, founded in 1880, were established by the University in consideration of the sum of £3,000 which was raised to commemorate the public services of the late Sir Edward Baines. Two scholarships were established, one of which is awarded as a senior scholarship. The other scholarship is an entrance scholarship, which until 1933 was awarded by the Yorkshire Union of Institutes [originally The Yorkshire Union of Mechanics' Institutes, of which organisation Edward Baines was the first president, a position which he held for a period of 50 years].

2. This scholarship is intended for students of either sex who have done satisfactory work at evening technical schools or other evening classes. Candidates should in general have had at least two years' practical experience in workshops or other equivalent industrial experience. Candidates must have reached a good standard of general education.

3. Candidates must not be under 18 or over 30 years of age.

4. The scholarship will be of the value of £50 per year and is intended to cover tuition fees and leave a margin available for books, travelling expenses, etc. The scholarship will be awarded for one year in the first instance and may be renewable for a second and a third year in the event of satisfactory progress. The scholar will be required to pursue in the University a course of study approved by the Senate.

5. Applications must be made on forms which may be obtained from the Registrar. Candidates will be required to produce a nomination or recommendation from the managers of the school endorsed by their employers.

6. The award will be made by the Senate in September. An examination, oral or written or both, may be held at the discretion of the Senate.

*The Benjamin Bland Scholarship*

1. The scholarship was endowed in 1933 by the late Miss Ann Bland, of Idle, Bradford, in memory of her father, the late Benjamin Bland of Idle. The donor bequeathed the sum of £1,500 to institute a scholarship to be known as 'The Benjamin Bland Scholarship' for the purpose of assisting students from the township of Idle to proceed to the University.

2. The scholarship is normally of the annual value of £50 and tenable for three academic years.

3. Candidates must have been born in the township of Idle and resident therein for the two years immediately preceding the award of the scholarship.

4. The award of the scholarship shall be made by the Senate after such examination or test of the candidates as the Senate may from time to time impose. The award of the scholarship is conditional on presentation of a satisfactory medical certificate from an officer appointed for the purpose by the University.

5. Any surplus funds in any particular year may be utilised by the Senate at their discretion in awarding a second scholarship to the next most deserving candidate as evidenced by the aforesaid examination or test.

6. The scholar or scholars elected will be required to pursue such courses in any of the Faculties of the University as may be considered most advisable by the Senate, having regard to the particular aptitude of the boy or girl in question and the desire of his or her parents or guardian.

7. Any vacancy in the scholarship will be duly announced in the public press, and applications should be sent to the Registrar not later than 31 January.

*The Boothman Scholarships*

1. The Boothman scholarships, each of the annual value of £40, were founded in 1949 with a sum of money bequeathed to the University by the late Mary Elizabeth Boothman in memory of her husband David Boothman and her son David William Boothman. Income in any year which is not allocated may be added to the capital invested.

2. The scholarships, which are open on equal terms to men and women, are tenable in the first instance for one year but may be renewed annually, subject to a satisfactory report on the work of the scholar in the previous year.

3. The holders of the scholarships will each be required to take a course leading to a degree in the University. While no conditions are made as to the subjects which scholars shall study, it is known that the donor wished to encourage the study of agriculture.

4. In making the award the University will take into consideration scholastic attainments, intellectual ability, and qualities of character and personality.

5. Candidates must submit a written statement giving particulars of their age, school career, public examination results, general interests and activities. This must be supported by a statement from the head master or head mistress of the school which they last attended.

6. The award will be made by the Senate after interview. Selected candidates will be required to attend at the University for this purpose.

*The William Arthur Crabtree Scholarships*

1. The William Arthur Crabtree scholarships, each of the approximate annual value of £40, were established in 1949 with a sum of money bequeathed to the University for this purpose by the late William Arthur Crabtree. Income in any year which is not allocated may be added to the capital invested.

2. The scholarships, which are open on equal terms to men and women, are tenable in the first instance for one year but may be renewed annually subject to a satisfactory report on the work of the scholar in the previous year.

3. The holders of the scholarships will be required to take courses leading to a degree in the University.

4. In making the award the University will take into consideration scholastic attainments, intellectual ability and qualities of character and personality.

5. Candidates must submit a written statement giving particulars of their age, school career, public examination results, general interests and activities. This must be supported by a statement from the head master or head mistress of the school which they last attended.

6. The award will be made by the Senate after interview. Selected candidates will be required to attend at the University for this purpose.

*The James Graham Memorial Scholarship*

1. The scholarship was endowed with the sum of £1,200 in 1933 by Mrs. James Graham of Headingley, Leeds, in memory of her husband, Dr. James Graham, who was for twenty-five years Director of Education in the city of Leeds.

2. The scholarship is of the annual value of £40, or such annual income as the investment of the above sum may produce, and is open to students intending to read for a degree in the Faculty of Arts, the Faculty of Economic and Social Studies or the Faculty of Science. It may be held for one, two or three years at the discretion of the Senate.

3. The scholarship is open to candidates whose parents live or have lived in Leeds, and who have attended a primary or secondary school in Leeds for at least three years, provided that they have complied with the regulations of the Joint Matriculation Board for entry upon a degree course.

4. The award of the scholarship shall be made by the Senate after such examination of the candidates as the Senate may from time to time impose. In the event of equality amongst the candidates preference will be given to a candidate desiring to proceed to a degree in commerce.

5. Any vacancy in the scholarship will be duly announced in the public press and to schools in Leeds six months before such vacancy occurs.

*The Margaret James Scholarships*

1. The scholarship shall be of the value of £50 per annum and, subject to satisfactory reports on the holder's conduct and progress, shall normally be tenable for three years.

The scholarship may rank for supplementation under the regulations of the Ministry of Education, provided that the holder has given evidence of suf-

ficiently high academic qualifications. The supplementary award, if made, brings the value of the scholarship up to an amount estimated to be adequate to cover the full cost of a university course.

2. The scholarship shall be awarded by the Senate after consideration of a report by a committee of award on which shall sit a representative of the Workers' Educational Association.

3. Candidates shall furnish such evidence as may be required of their educational qualifications and financial circumstances. They may be required to attend for an interview.

4. The scholarship shall be awarded to a woman student who is unable to enter a university without financial assistance, and who has attended classes arranged by, or in association with, the Workers' Educational Association.

5. The scholarship will be awarded to a candidate whom the awarding committee consider able to satisfy the requirements for entry upon a degree course not later than the beginning of the session following the award.

6. The successful candidate will be required to read for a degree in one of the Faculties of the University and to give a written undertaking of her intention to do so.

7. Applications should reach the Registrar not later than 1 April.

### *The Blanche L. Leigh Scholarship in music*

1. Mrs. Percy Leigh presented to the University in 1931 a sum of money for the establishment of a scholarship or scholarships in music.

2. The scholarship is of the annual value of between £30 and £70 and is tenable for three years.

3. The award will ordinarily be made every three years, but the Senate reserves the right not to make an award in any year when there is no candidate of sufficient merit. An additional scholarship or scholarships may be offered in any year if the funds permit.

4. The scholarship will be awarded on the result of an examination in music including harmony in not more than four parts, the history of music, and ear tests.

5. The scholar will be required throughout the term of his scholarship to attend courses of instruction in the University of Leeds either as required for the degree of Bachelor of Arts of the University in general studies, a three years course in music being included in the scheme of study, or as required for the degree of Bachelor of Arts in special studies in music of the University.

6. When a vacancy occurs particulars of the examination will be announced in the public press.

### *The John Gilbert Vause Memorial Scholarship*

1. The late Mr. F. W. Vause, of Roundhay, Leeds, bequeathed the sum of £1,000 to the University to found a scholarship in memory of his son, Lieutenant John Gilbert Vause of the 15th West Yorkshire Regiment, who died in the first battle of the Somme.

2. The scholarship, of the approximate annual value of £35, is tenable in the first instance for one year, and may be renewed for one year or two years.

3. It is open to matriculated students of the University of Leeds and graduates in arts or science of a British university. Other things being equal, preference will be given to candidates who are or have been pupils of the Leeds Grammar School.

4. The scholar is required to pursue the courses prescribed for the degrees of Bachelor of Medicine and Bachelor of Surgery of the University.

5. The scholarship is awarded by the Senate on the recommendation of a special committee after interview of candidates and consideration of their records.

### *The Brick Development Association Scholarships*

1. Two entrance scholarships have been provided by the Brick Development Association Ltd., which represents the interests of manufacturers of building bricks.

2. The scholarships are intended to enable promising students to read for an Honours degree, either in ceramics or in engineering (normally chemical engineering or mechanical engineering in which event ceramics must be an ancillary subject) as preliminary training for entry into the building brick industry.

3. Each scholarship will be of the annual value of £350 plus fees and higher awards up to £400 plus fees may be made in special circumstances. A supplementary allowance of £20 per annum is made in addition to the award for the purchase of relevant books and materials. The scholarships are tenable for three or four years, according to the course of study; but continuation for each year after the first will depend upon a satisfactory report on the work of the scholar.

4. The scholarships are open to applicants from school or from industry; among the latter preference will be given to candidates already engaged in the building brick industry.

5. Candidates must be of British nationality and qualified to enter upon a degree course. They must furnish particulars of their scholastic attainments, industrial experience (if any) and their personal interests and activities. These particulars, together with two references as to character, must be supplied on a form to be obtained on application to the Registrar.

6. The scholarships will be advertised, and applications should be submitted to the Registrar before 1 April.

7. These awards will be made after interview and selected candidates will be required to attend at the University for this purpose.

### *The Charles Brotherton Scholarships in colour chemistry*

1. Two entrance scholarships, each of the value of £125 a year, tenable at the University by students in attendance upon the Honours degree course in the department of colour chemistry and dyeing were made available in 1940 by Mr. Charles Brotherton of Leeds.

2. The entrance scholarships are tenable for three or four academic years according to whether or not the scholar has attained a standard that permits him to be excused the first year work of the four years course leading to the degree of Bachelor of Science with Honours in colour chemistry. Their continuance each year will be subject to a satisfactory report on the work of the scholar in the previous year.

3. Candidates, who must be of British nationality, must supply information with regard to their school career, including the results of public examinations they have taken, and must be qualified to enter upon a degree course.

4. In making the awards, not only will intellectual and scholastic attainments and ability be taken into consideration but the greatest importance will be attached to qualities of character, personality and promise of leadership.

5. Candidates must give references as to character from not less than two persons who shall not be relatives of the candidate and must supply a statement from the head of the school in which they spent the last three years of school life. They must also furnish a written personal statement concerning their general interests and activities including sports, and their intended career after completing their studies.

6. The awards will be made after interview by the scholarships committee upon which there will be a representative of the Brotherton Trust. Selected candidates will be required to attend at the University for this purpose.

7. Any surplus funds in any particular year may be utilised by the scholarships committee at their discretion either as an entrance scholarship of the value of £100 a year in a subsequent year or as a scholarship for an undergraduate already in residence at the University and studying for the degree of Bachelor of Science with Honours in colour chemistry. In the latter case, the scholarship will be of varying amount, dependent upon the candidate's circumstances, and will normally be awarded for one year in the first instance but may be renewed for a second year.

*The Charles Brotherton Scholarships*
*in chemical engineering and gas engineering*

1. In 1942 Mr. Charles Brotherton agreed to provide two scholarships of value up to £125 a year in order to enable promising students to follow courses in chemical engineering and gas engineering in the appropriate departments.

2. The scholarships are tenable for periods of up to four years in order to enable students to complete Honours courses but continuation for each year after the first will depend on a satisfactory report on the work of the scholar.

3. The scholarships are open to applicants from school and to applicants who are already engaged in industry.

4. Candidates must be of British nationality and qualified to enter upon a degree course. Candidates must furnish particulars of their scholastic attainments, industrial or practical experience and other personal activities and interests. These particulars, with references as to character, must be supplied on a form to be obtained on application to the Registrar.

5. The awards will be made after interview. Candidates will be required to attend at the University for this purpose.

### *The Connolly Scholarships*

1. Two entrance scholarships, each of the value of £100 a year, tenable at the University by students in attendance upon the Honours degree course in leather science, in the Procter department of food and leather science, were made available in 1962 by Connolly Bros. (Curriers) Limited.

2. The entrance scholarships are tenable for three or four academic years according to whether the scholar is permitted to take the course leading to the degree of Bachelor of Science with Honours in leather science in three years or in four years. Continuance each year will be subject to a satisfactory report on the work of the scholar in the previous year.

3. Candidates must be of United Kingdom parentage and birth, and qualified to enter upon a degree course. They must supply information with regard to their school career, results of public examinations, and general interests and activities. Candidates must give references as to character from not less than two persons who shall not be relatives of the candidate.

4. The scholarships will be awarded by Senate on the recommendation of the Procter professor of food and leather science.

5. Applications must be received by the Registrar not later than 1 June.

### *The EMGAS Scholarship*

1. The East Midlands Gas Board offers annually, one entrance scholarship tenable at the University of Leeds. The scholarship is open to candidates from schools or from industry; preference will be given to those intending to enter the employment of the East Midlands Gas Board.

2. The scholarship is awarded by the Board after consultation with the Livesey professor of coal gas and fuel industries, the University of Leeds.

3. The scholarship is tenable for a course leading to the degree of Bachelor of Science in gas engineering or fuel science or, with the agreement of the Board, some other relevant subject.

4. The value of the scholarship is £450 per annum in addition to tuition fees.

5. The holder will be required to undertake approved vacation work, for which an additional allowance will be paid.

6. Applicants must make application for admission to the relevant courses in the University of Leeds.

7. Applications should be sent to the Registrar not later than 1 April. Forms of application are available on request from the Registrar, University of Leeds, Leeds 2.

### *The Gunnell Studentships in colour chemistry and dyeing*

1. The directors of Messrs. Johnson Brothers (Dyers) Ltd., of Bootle, Liverpool, provided in 1952 a fund of £2,000 to endow two studentships in commemoration of the services of the late Mr. Oswald Gunnell, formerly chairman and managing director of the company, who was trained at the Yorkshire College.

2. The awards are each of the approximate annual value of £50 and are tenable in the department of colour chemistry and dyeing for one year in the first instance. They may, at the discretion of the Senate, be renewed for two or three years provided that the report on the work of the student for the previous year is satisfactory.

3. Other things being equal, preference will be given to students who have resided, or whose parents have been resident, in the West Riding of Yorkshire and who would otherwise find difficulty in entering upon a University course.

4. The studentships will be awarded by Senate on the recommendation of the professor of colour chemistry and dyeing.

*The Joe Haley Scholarships*

1. The Joe Haley scholarships were established in 1948 under the terms of the will of Mrs. Annie Haley, who bequeathed £2,000 for the founding of one or more scholarships open to the children of parents resident at the time of the award in the borough of Dewsbury.

2. The regulations for the award of the scholarships, which are entirely within the discretion of the Vice-Chancellor for the time being, are as follows:

3. Each scholarship, of a value to be determined by the Vice-Chancellor, shall be awarded to the child of a parent resident at the time of the award in the borough of Dewsbury.

4. Holders of scholarships shall pursue a full-time course of study for a first degree of the University or shall engage in full-time research.

5. The period of tenure of a scholarship shall be one year in the first instance. Renewal will be subject to a satisfactory report upon the scholar's work.

6. In making an award, preference will be given to a candidate who proposes to study a subject connected with one of the staple trades of Dewsbury.

7. Income not expended in any year may be added to the capital funds of the scholarship or used for payments of maintenance grants to students who can comply with the requirements set out above.

*The John Deakin Heaton Scholarship*

1. The late Mr. Beresford R. Heaton of Gomshall, Surrey, in 1939 bequeathed the sum of £1,000 to the University to found a scholarship in memory of his father John Deakin Heaton, the first chairman of the Council of the Yorkshire College.

2. The scholarship, of the approximate annual value of £30, is tenable in the first instance for one year and may be renewed for one or two years.

3. It is open to matriculated students of the University of Leeds and to graduates in arts or science of a British university.

4. The scholar is required to pursue the courses prescribed for the degrees of Bachelor of Medicine and Bachelor of Surgery of the University.

5. The scholarship is awarded by the Senate on the recommendation of a special committee after interview of candidates and consideration of their records.

### *The Alfred Henshall Memorial Scholarship*

1. This scholarship was founded by the North-Western Gas Board to perpetuate the memory of the late Mr. Alfred Henshall's services as deputy chairman of the Board.

2. A scholarship of the annual value of £360 plus fees will be awarded each year to an employee of the North-Western Gas Board to enable him to follow a course of study leading to the degree of Bachelor of Science with Honours in gas engineering, general fuel science or chemical engineering.

3. The scholarship is tenable for four years but continuation for each year after the first will depend upon a satisfactory report on the work of the scholar in the previous year.

4. Candidates must be of British nationality and qualified to enter upon a degree course; and must furnish particulars of their scholastic attainments, industrial or practical experience and other personal activities and interests. These particulars, with references as to character, must be supplied on a form to be obtained on application to the Registrar.

5. The award will be made after interview. Candidates will be required to attend at the University for this purpose.

6. Applications must be received by the Registrar not later than 30 June.

### *The William Cartwright Holmes Scholarship in gas engineering*

1. The scholarship was endowed in 1929 by Mr. P. F. Holmes and Mr. D. M. Henshaw as a memorial to William Cartwright Holmes of Huddersfield.

2. The scholarship is held at the University of Leeds.

3. The normal value of the scholarship, which may be increased in necessitous cases, is £140 a year, and it is tenable for one, two or three years, with power of extension for a fourth year on the recommendation of the Senate to the William Cartwright Holmes scholarship committee, appointed by the Institution of Gas Engineers.

4. The continuation of the scholarship each year after the first will depend on the work done by the scholar in the previous year being reported to the committee by the Senate as satisfactory.

5. The scholarship is intended to enable a student to take a course of study at the University in preparation for a responsible position in gas engineering.

6. Candidates for election to the scholarship are required to produce evidence of having reached a standard of scientific or technological education sufficient to enable them to take advantage of the course leading to the degree of Bachelor of Science in gas engineering, and to give an undertaking of their intention to follow the profession of gas engineering.

7. As each vacancy occurs the award of the scholarship will ordinarily be made during the the month of June after advertisement in the technical press.

8. The scholarship will be awarded by the Senate after consultation with the William Cartwright Holmes scholarship committee.

9. Each candidate is required to submit a statement of his previous education and of his scientific or technological qualifications, testimonials from the

head of the institution in which he received his previous education, and if he has been already engaged in a gas engineering works, from the engineer or manager of the works.

10. The Senate, in conjunction with the William Cartwright Holmes scholarship committee, will determine what examination, if any, is necessary in order to guide them in the award of the scholarship.

*The Matthews Scholarship*
*in colour chemistry and dyeing*

1. A fund of approximately £1,500 was given to the University in 1946 by the court of the Worshipful Company of Dyers and represented the capital and accumulated interest of a gift made to the Dyers Company by Mr. Trevor Jocelyn Matthews, a former Prime Warden of the Company.

2. The fund will be used, until exhausted, for the provision of a 'Matthews Scholarship' to enable promising students of limited means to undertake the course leading to the degree of Bachelor of Science with Honours in colour chemistry and dyeing.

3. The award will normally be of the value of £100 a year but may vary between £50 and £120 a year according to the circumstances of the scholar. The scholarship will be tenable for three years subject to a satisfactory report on the work of the scholar in the previous year.

4. The scholarship will be awarded by the Senate after interview. Selected candidates will be required to attend at the University for this purpose.

*The Shell Scholarships in mining*

1. Two or three scholarships in mining, of the value of £470 a year, which includes £20 for books, have been made available each year, tenable at the University by a student in attendance upon the Honours degree course in the department of applied mineral sciences.

2. The scholarships are tenable for three and four sessions. Their continuance each year will be subject to a satisfactory report on the work of the scholar in the previous year.

3. In making the awards the University will not only take into consideration intellectual and scholastic attainments and ability but will also attach importance to qualities of character and personality.

4. Candidates must give references as to character from not less than two persons who shall not be relatives of the candidate. Candidates must furnish a written personal statement concerning their general interests and activities including sports.

5. Candidates must supply information regarding their school career, together with a statement from the head of the school in which they spent the last three years of school life. Candidates engaged in business or industry should also supply evidence of their experience, supported by a letter of recommendation from their employer.

6. Candidates must supply evidence of intellectual qualifications, including the results of any public examinations they have taken, and must be qualified to enter upon a degree course.

7. The awards will be made after interview. Selected candidates will be required to attend at the University for this purpose.

### *The Richard Sutcliffe Scholarship in mining*

1. The firm of Messrs. Richard Sutcliffe Ltd. has made available a scholarship in mining of the value of £160 a year.

2. The scholarship is open to employees of Messrs. Richard Sutcliffe, Ltd. on the same conditions as to other persons.

3. The scholarship, which was awarded for the first time in 1946, is tenable for four years. The continuation of the award after the first year will be subject to a satisfactory report on the work of the scholar in the previous year.

4. The scholar is required to undertake courses leading to the degree of Bachelor of Science of the University with Honours in mining.

5. The scholarship may only be held by a student who would otherwise be unable to undertake the course, and in making the award the University will not only take into consideration intellectual and scholastic attainments and ability, but will also attach importance to character, personality and promise of leadership.

6. Candidates must submit a written statement giving particulars of their school career, public examination results, general interests and activities. This must be supported by a statement from the headmaster of the school which they last attended. Candidates must also furnish references as to character from not less than two persons not related to them; those engaged in business or industry should, in addition, submit a statement from their employer.

7. The award will be made by the Senate after interview; selected candidates will be required to attend at the University for this purpose.

### *The Corbet and Henry Woodall Scholarship in gas engineering*

1. Formerly known as the Corbet Woodall scholarship, this award was originally endowed in 1915 by Sir Corbet Woodall through the Institution of Gas Engineers and is to be held at the University of Leeds. On the death in 1948 of Mr. Henry Woodall, a son of Sir Corbet, certain gas companies with which the late Mr. Woodall was more closely associated, provided a sum to increase the endowment. At the suggestion of these contributors, the name of the scholarship was changed in order to perpetuate his memory.

2. The value of the scholarship is now approximately £135 a year and it is tenable for three years, with power of extension for a fourth year on the recommendation of the Senate to the Corbet Woodall scholarship committee.

3. The continuation of the scholarship each year after the first will depend on the work done by the scholar in the previous year being reported to the committee as satisfactory.

4. The scholarship is intended to enable a student to take a course of study in gas engineering at the University in preparation for a responsible position as a gas engineer. Candidates for election to the scholarship are required to produce evidence of having reached a standard of scientific or technological education sufficient to enable them to take advantage of the course leading to the degree of Bachelor of Science in gas engineering, and to give an undertaking of their intention to follow the profession of gas engineer.

5. On each vacancy the award of the scholarship will ordinarily be made during the month of June after due advertisement in the technical press.

6. The scholarship will be awarded by the Senate after consultation with the Corbet Woodall scholarship committee.

7. Each candidate is required to submit a statement of his previous education and of his scientific or technological qualifications, testimonials from the head of the institution in which he received his previous education, or, if he has been already engaged in a gas engineering works, from the engineer of the works.

8. The Senate, in conjunction with the Corbet and Henry Woodall scholarship committee, will determine what examination, if any, is necessary in order to guide them in the award of the scholarship.

*The Woolmen's Company Scholarship*

1. The scholarship was founded in 1927 by the Worshipful Company of Woolmen with the object of encouraging study in connection with the wool trade.

2. The scholarship is of the annual value of £40, and is normally tenable for three academic years in the department of textile industries.

3. The scholarship is open to students entering upon the first year of a course of study leading to a degree or a diploma of the University in the department of textile industries. Failing a suitable candidate entering upon the first year course of study, the scholarship may be awarded to a student who has already completed the first or second year of his attendance in the department of textile industries and wishes to complete his degree or diploma course of study in that department.

4. Preference will be given to candidates whose means are otherwise insufficient to enable them to pursue their studies in the University.

5. When a vacancy occurs the scholarship will be advertised in the press. Applicants may be required to present themselves for a special examination, which will be held in September.

The *Clothworkers' Scholarships* in colour chemistry and dyeing and in textile industries may also be awarded as entrance scholarships (see page 707).

# REGULATIONS FOR SENIOR SCHOLARSHIPS

[Students are not required to make application for election to senior scholarships.]

*The Edward Baines Scholarship*

1. The Edward Baines scholarship, founded in 1880, was established by the University in consideration of the sum of £3,000 which was raised to commemorate the public services of the late Sir Edward Baines. One half of the sum annually devoted to this purpose is awarded by the University in the form of a senior scholarship tenable by candidates who have attended a public elementary school within the City of Leeds; the other half is awarded in the form of an entrance scholarship.

2. The scholarship is tenable in the Faculties of Arts, Science or Technology [except in textile industries].

*The Emsley Scholarship*

1. The scholarship was endowed in 1886 by the late Thomas Emsley, Esq., of Burley-in-Wharfedale, who bequeathed £1,000 for the purpose of founding one or more scholarships in the Yorkshire College.

2. The scholarship is tenable in the Faculties of Arts, Science or Technology [except in textile industries].

*The Salt Scholarship*

1. The scholarship was founded by the late Sir Titus Salt, Bt., in 1875.

2. Candidates must be scholars or registered students of the University in at least their sixth term.

3. The value of the scholarship is £20 a year and it is tenable for two years.

4. The scholarship is tenable in the Faculty of Arts and the scholar elected will be required to continue a course of study at the University preparatory for a degree in arts of the University of Leeds. In the event of graduation at the end of the first year of tenure, the scholar will be required to pursue a course of postgraduate study satisfactory to the Senate.

*The William Summers Scholarship*

1. The scholarship was founded by Mr. and Mrs. Buckley, of Ryecroft Hall, Audenshaw, near Manchester, in memory of William Summers, Esq., late Member of Parliament for Huddersfield, and for many years a member of the Court of the Victoria University.

2. Candidates for this scholarship must have been resident in the parliamentary borough of Huddersfield during one full year, or must have attended a school in the said borough for the same period.

3. The scholarship is tenable in the Faculty of Arts and the scholar elected will be required to pursue a course for the degree of Bachelor of Arts with Honours.

*The Charles Wheatley Scholarship*

1. The scholarship was established by the University in 1903, in consideration of the sum of £1,500 given by the Misses Robinson of Mirfield, and Mrs. Steele of Kettering, in memory of the late Charles Wheatley, Esq., of Mirfield. In case of equality of candidates, a preference is to be given to residents in Mirfield.

2. The scholarship is tenable in the Faculty of Arts and the scholar elected will be required to pursue a course for the degree of Bachelor of Arts or Bachelor of Laws of the University.

*The Wheeler Memorial Scholarship*

1. The scholarship was founded in 1946 to commemorate the services to the University and the practical interest in the social work of the city of Leeds of Archibald Edward Wheeler, Registrar from 1912 to 1944.

2. The endowment of £1,000 was provided by contributions from members of the Leeds Luncheon Club, the Leeds Rotary Club, the University and the Leeds Young Men's Christian Association. The annual income is approximately £30.

3. The scholarship is open to students entering upon a course of study in the University leading to a degree or diploma in social studies; the award will be made in the first instance for one year and may be renewed. If there is no suitable candidate who is entering on the first year of study, the scholarship may be awarded to a student who has already completed the first year of the course or who is undertaking postgraduate study in the field of social studies.

4. If an award is not made in any year the income from the endowment may either accumulate or be used for subsequent awards to undergraduate or postgraduate students.

5. Applications must be sent to the Registrar not later than 1 August.

*The Akroyd Scholarships*

1. The scholarships are maintained by funds accruing from the Akroyd Trust and are intended for the encouragement of the study of natural science. They are tenable for three years in the Faculties of Science or Technology.

2. Women are not eligible for the Akroyd scholarships.

*The Brown Scholarships*

1. The scholarships were endowed in 1877 by the late Henry Brown, Esq., of Bradford and Rawdon, who bequeathed £5,000 to the Yorkshire College for the purpose of founding five or more scholarships, to be called the Brown scholarships, for students attending the said college and receiving instruction in the various branches of those sciences which are applicable to the industrial arts.

2. Other things being equal, preference will be given to candidates who have declared their intention of entering some industry, instruction in the principles of which is given in the University, or of engaging in the teaching of science. In the case of equality of candidates a preference will be given to residents in Bradford or natives of Bradford.

3. The scholarships are tenable in the Faculties of Science or Technology.

*The Stephenson Clarke Scholarship*

1. The scholarship was founded in 1926 by Colonel Stephenson Robert Clarke, *C.B.*, LL.D., Master (1924-5) of the Clothworkers' Company who are the trustees.

2. The endowment of the scholarship consists of £1,000. The annual value of the scholarship consists of the free income of this endowment and amounts approximately to £45 a year.

3. The scholarship will be awarded annually. Subject as hereinafter mentioned [para. 5] the scholarship will be awarded in the first year to a student in the department of textile industries and in the following year to a student in the department of colour chemistry and dyeing and will continue to be thus alternately awarded. The object of the scholarship is to enable the successful candidate to undertake a third or fourth year course of study in one of these departments and candidates must be completing respectively their second or third year attendance in either the textile industries or the colour chemistry and dyeing department. A preference will be given to students completing a third year and desiring to enter for a fourth year course of study.

4. The scholarship is tenable for one academic year.

5. Failing the application of a qualified candidate for the scholarship in the department to which the scholarship falls in a given year, the scholarship may be awarded to another qualified student in the other department, but without affecting the ordinary sequence.

6. Failing the application in any year of a qualified candidate in either department, the amount of the scholarship for that year shall be added to capital.

7. The appointment to a scholarship shall be made by the founder of the scholarship during his lifetime out of nominations submitted by the Vice-Chancellor. Thereafter the appointment shall be made by the Court of the Clothworkers' Company in like manner.

8. Clauses 1, 2 and 3 of the general regulations of the University relating to scholarships shall, so far as may be applicable, apply to the Stephenson Clarke scholarship.

9. Power is reserved to the founder [Colonel Stephenson Robert Clarke] during his lifetime and afterwards to the trustees [the Clothworkers' Company], in the latter case after consultation with the Senate of the University, to alter or modify the above regulations, including the amount of the scholarship or scholarships to be awarded.

10. Any dispute or difference arising in regard to the construction of any of the above rules and regulations or conditions or in regard to any award made thereunder shall be settled by the founder during his lifetime and afterwards by the trustees, any such decision to be final and conclusive.

*The Clothworkers' Scholarships*
*in colour chemistry and dyeing*

1. The Worshipful Company of Clothworkers of the City of London provides funds for the award of a scholarship of the value of £40 a year.

2. The scholarships may be held either as entrance or senior scholarships and for either three or four years; renewal of a scholarship in successive years will

be subject to a satisfactory report on the work of the scholar in the previous year.

3. Scholars will be required to take courses in the University leading to a degree or diploma in the department of colour chemistry and dyeing.

4. Candidates must give references as to character from not less than two persons who shall not be relatives of the candidate. They must furnish a written personal statement concerning their general interests and activities, including sports, their proposed course of study and their intended career after completing their studies.

5. The scholarships will be awarded by the Senate; selected candidates may be required to attend for interview at the University.

6. Applications in the case of the entrance scholarships must be sent to the Registrar not later than 31 January.

### *The Clothworkers' Scholarships in textile industries*

1. In 1947 the Worshipful Company of Clothworkers of the City of London decided to combine the sums of £30 and £60 hitherto made available annually for the provision, respectively, of 12 evening class studentships and one senior scholarship in the department of textile industries and to use the combined funds for the award of two or more scholarships each of the value of not less than £40 a year.

2. The scholarships may be held either as entrance or senior scholarships and for either three or four years. Renewal of a scholarship after the first year will be subject to a satisfactory report on the work of the scholar in the previous year.

3. Scholars will be required to take courses in the University leading to a degree or diploma in textile technology.

4. Candidates must give references as to character from not less than two persons who shall not be relatives of the candidate. They must furnish a written personal statement concerning their general interests and activities, including sports, their proposed course of study and their intended career after completing their studies.

5. The scholarships will be awarded by the Senate; selected candidates may be required to attend for interview at the University.

### *The Craven Scholarship*

1. The scholarship was established in the year 1887 by a number of the engineers of Leeds, in recognition of the services rendered by the late Joseph Craven, Esq., to the mechanical engineering trades of the district.

2. Candidates must have been, previous to the day of examination, resident in the city of Leeds for a period or periods amounting together in the aggregate to at least five years, and be so resident at the time they present themselves for examination.

3. The scholarship is tenable in the Faculty of Technology.

### *The Alfred Lund Scholarship*

1. A fund was instituted in 1924 by the late Alfred Lund, Esq., of Pudsey, for the purpose of assisting deserving students to complete their studies in the departments of colour chemistry and dyeing and textile industries, or to prosecute advanced study and research in some branch of knowledge germane to the dyeing and textile industries.

2. The number of scholarships awarded each year will depend upon the number of suitable candidates and the amount of income available. The scholarships are of the annual value of £25, which may be supplemented by a grant for maintenance not exceeding £100. They are awarded for one year and may be renewed.

3. Students who have attended courses of study for degrees or diplomas of the University in the department of colour chemistry and dyeing or the department of textile industries for not less than one session, are eligible for the scholarships.

4. Holders of the scholarships are required either to complete their courses for a degree or diploma in the departments of colour chemistry and dyeing or of textile industries, or, if they have completed such courses, to pursue advanced study and research in the University or in some other university or learned institution under suitable guidance in a manner approved by the Senate.

5. The scholarships are awarded by the Senate on the recommendations of the professors of colour chemistry and dyeing and of textile industries at the end of the summer term.

### *The Medical Scholarship*

1. The scholarship was instituted by the Leeds School of Medicine in 1888. It is of the value of approximately £130 which is set against the fees for the medical course.

2. The scholarship is tenable in the Faculty of Medicine and is awarded, after a report from the examiners, on the results of the second examination for the degrees of Bachelor of Medicine and Bachelor of Surgery of the University.

3. The scholarship will be awarded only if there is a suitable candidate who, in the opinion of the examiners, is of sufficient academic distinction, and who is in need of financial assistance.

# REGULATIONS FOR GRADUATE STUDENTSHIPS

*University Research Studentships*

A limited number of University studentships equivalent in value to a State Studentship may be offered annually and will ordinarily be awarded to students who have distinguished themselves in the final examinations of the University. In the election to studentships preference will ordinarily be given to students who are prepared to undertake advanced study or research with a view to presenting themselves for a higher degree of the University of Leeds.

*External Postgraduate Studentships*

1. A limited number of research studentships, not exceeding six, is offered annually to graduates of universities other than Leeds. These studentships, each of the value of £475 a year plus fees, will be tenable for advanced study or research in all Faculties and will be renewable annually. Maximum tenure is three years.

2. Applications should be submitted on forms obtainable from the Registrar, The University, Leeds 2. The closing date for receipt of completed application forms is 1 May.

*The Frank Gott Scholarship*

1. The scholarship was endowed in 1941 by Mrs. Beryl K. Gott in memory of her husband, the late Mr. Frank Gott, Lord Mayor of Leeds in 1917. It is not administered by the University but by an independent body of trustees.

2. The scholarship is awarded to an Honours graduate of any university situated in Great Britain or Northern Ireland or in one of the Colonies or Dominions of Britain who shall desire to commence or shall have commenced some form of postgraduate study at the University of Leeds.

3. Women are not eligible for the Frank Gott scholarship.

4. The award is as a rule biennial. The scholarship is tenable for two years and the holder is required to pursue in the University a course of advanced study or research which has been approved by the Senate.

5. The annual value of the scholarship is approximately £80 [which may be increased to the value of a State Studentship awarded by the Ministry of Education].

6. The award is made ordinarily in the month of June. Applications must be addressed through the Registrar to the trustees of the Gott Bequest who will require evidence of the British and Christian parentage of the applicant in accordance with the terms of the bequest. Each applicant must state the course of study which he proposes to follow.

7. The scholar will be required to prosecute his advanced study or research to the satisfaction of the Senate and to present to the Registrar before 1 June of the year following the award a report of the work done. At the expiration of the full period of tenure a final report shall be submitted to the Registrar.

## *The Queen's College, Oxford*
## *The Hastings Senior Scholarships for the Universities of Leeds, Sheffield and Hull*

1. Hastings senior scholarships will be awarded by Queen's College, to men whom the Governing Body judges to be of sufficient merit and fitness, after or without examination as the Governing Body may determine.

2. Successful candidates will be required to read at Oxford either for an Honour School or for an advanced degree (i.e. B.Litt., B.Sc., B.D., B.C.L., B.Phil. or D.Phil.) or to pursue such other course of study as the Governing Body may determine.

3. The normal maximum value of a scholarship shall be £650 per annum. Subject to the consent of the Governing Body a scholarship may be held with other awards or grants up to a maximum value of £100 per annum, but the annual value of a scholarship will be reduced to £100 if the scholar is awarded a state studentship or a D.S.I.R. grant. In addition the Governing Body may from time to time make travel grants to scholars for the purpose of defraying expenses of travel and maintenance in connection with their work or study whether in the United Kingdom or elsewhere.

4. The scholarships are confined to persons who have passed with Honours all the examinations for the Bachelor's degree at the University of Leeds, Sheffield or Hull.

5. One scholar may be elected each year. The Vice-Chancellor of Leeds, the Vice-Chancellor of Sheffield and the Vice-Chancellor of Hull may each recommend in writing to the Provost one or more candidates for consideration before 15 March. The formal election of the scholar will normally be made in July, but the Governing Body will before 1 May inform the successful candidate of its intention to elect him.

6. The scholar will be elected in the first place for one year, and will be re-elected for a second year if the Governing Body is satisfied with his industry, good conduct and progress. In exceptional circumstances the scholarship may be renewed for a third year.

7. A scholar shall be subject to such regulations as to residence, instruction and discipline as the Governing Body may from time to time determine.

8. Any scholar who shall marry without the consent of the Governing Body (which consent shall not be given unless the scholar has attained the age of twenty-two) or be elected to a fellowship or cease to be a member of the College, shall thereby vacate his scholarship, and no scholar shall accept any office or undertake any work which in the opinion of the Governing Body is incompatible with the full performance of his duties as a scholar.

9. The Governing Body may grant leave of absence (with or without emoluments) to a scholar in case of illness or for other sufficient reasons. If the scholar received no emoluments during such a period of absence it shall be lawful for the Governing Body to deduct a part or the whole of such a period in calculating the length of tenure of his scholarship as defined in paragraph 6 above.

### *The Bodington Memorial Fund*

1. The Bodington memorial fund commemorates the work of the late Sir Nathan Bodington as principal of the Yorkshire College and first Vice-Chancellor of the University of Leeds. It is devoted to the encouragement of advanced study in Greek and Latin [including language, literature, history, philosophy and archæology] among graduates of the University.

2. The scheme for the administration of the fund includes the following provisions:

(a) An award or awards will be made annually by the University whenever there are competent applicants.

(b) The income will be allowed to accumulate when no awards are made, the accumulations to be treated as current year's income.

(c) The award or awards will take the form of a fellowship, scholarship, prize or grant, or any combination of these as may seem from time to time practicable and desirable.

(d) The annual income available for award is approximately £45.

3. Since the foundation of the fund, grants have been made for the purchase of books and for visits to libraries or other centres of research. Awards of money may however be made for any other objects cognate to the trust. It is hoped that when the accumulated funds allow, a fellowship or scholarship tenable for one year may be awarded to a graduate who has published or prepared for publication a work of distinction in the field of classical learning.

### *The John Rutson Scholarship*

1. The scholarship was founded by Mr. Henry Rutson of Northallerton in memory of his brother Mr. John Rutson. It has been assigned to the Faculty of Arts for the encouragement of research, and the scholar will be chosen from among those who have shown promise of ability to conduct such research.

2. The scholarship is of the annual value of about £70 [which may be increased to the value of a State Studentship awarded by the Ministry of Education] and is tenable for one year but may be renewed for one year more.

3. The successful candidate shall be required to undertake advanced study or research in the University or in some other university or learned institution or under suitable guidance in a manner approved by the Senate.

4. The scholar shall also be required to furnish a report of the work done by him or her during the term of the scholarship, such report to be sent to the Registrar before 1 June of the year following the award of the scholarship in order that it may be laid before the Senate.

### *The Harold Tetley Postgraduate Studentship in the history of art in Yorkshire*

1. The studentship, designed for the promotion of the study of the history of art in Yorkshire, was founded in 1938 by Colonel C. H. Tetley [Pro-Chancellor from 1926 to 1946].

2. It is of the value of £200 a year and is tenable for two academic years subject to a favourable report on the student's work in the first year. In special circumstances the tenure of the studentship may be extended for a third year.

3. The successful candidate shall work under conditions approved by the Senate. He will be expected to submit a report upon the progress of his work at the close of the first year and ultimately to publish the results of his investigations.

### *Joseph Wright Studentships*

1. The studentships were founded in 1963 from the estate of Joseph Wright, Professor Emeritus of Comparative Philology in the University of Oxford, author of the English Dialect Dictionary, and Doctor of Letters *honoris causa* of this University, who died in 1930.

2. The income of the fund shall be used for the provision of postgraduate studentships in the English and German languages and literatures.

3. The value of each award shall be equal to that of a university postgraduate studentship.

4. The studentships shall be tenable for advanced study or research in the school of English or the department of German language and literature. They shall be awarded for one year, renewable annually, the maximum tenure being three years.

5. The studentships shall be awarded by the Senate on the recommendation of the head of the appropriate department.

### *Kenneth Hargreaves Studentship in Commercial Law*

1. The studentship was instituted in 1963 by Brigadier Kenneth Hargreaves, C.B.E., T.D., D.L., a representative of the Clothworkers' Company on the Court of the University.

2. The studentship shall be awarded for the purpose of studying for the degree of Master of Laws in Commercial Law of the University.

3. The annual value of the award shall normally be £500.

4. A candidate shall be a graduate in law of this or any other approved university. Preference will be given to a member or registered student of the Chartered Institute of Secretaries.

5. The studentship shall be tenable for one or two years. No award shall be made unless there is a candidate of sufficient merit.

6. The studentship shall be awarded by the Senate, after interview by a committee consisting of the donor, the head of the department of law, the chairman of the scholarships and studentships committee, the chairman of the advanced studies committee of the Faculty of Law, and the secretary of the Chartered Institute of Secretaries.

7. The studentship shall be advertised in the press.

8. Any proposals for variations in the regulations shall be approved by the donor and the University.

*William Harrison Graduate Scholarships*

In 1957, William Harrison, LL.D., furnished an endowment for the benefit of students and graduates of the Faculty of Law, part of which may from time to time be made available for awards to assist graduate students of outstanding ability to undertake approved studies in this University or elsewhere.

These awards will be known as the William Harrison Graduate Scholarships and will be awarded by the Senate on the recommendation of the head of the department of law.

*The Lowson Scholarship*

1. The scholarship was endowed in 1943 by Mr. W. Lowson, a member of the staff of the department of chemistry since 1902. The scholarship has for its object the encouragement of interest and proficiency in the subject of inorganic chemistry.

2. It is awarded on the recommendation of the professor of inorganic and structural chemistry to a graduate of the University of Leeds or of some other university to enable him to carry out research in the department of inorganic and structural chemistry of the University of Leeds. Preference will be given to candidates whose proposed research involves analytical chemistry.

3. The scholarship is of the value of approximately £450 plus fees and is tenable for one session in the first instance with the possibility of renewal.

*The Richard Reynolds Scholarship*

1. The scholarship was endowed in 1928 by the late Alderman F. C. Clayton of Birmingham, who served his apprenticeship with the firm of Harvey and Reynolds, manufacturing chemists, Leeds, during the years 1859 to 1864. The donor bequeathed £2,000 for the purpose of founding a scholarship to be called 'The Richard Reynolds Scholarship' in recognition of the valuable training received by him from Richard Reynolds during his apprenticeship.

2. The scholarship, of the annual value of approximately £100, is tenable for one year and may be renewed for a second or third year.

3. The scholarship is open to graduates of the University who have graduated in the Faculty of Science or the Faculty of Medicine or to pharmaceutical chemists who have taken their courses for the qualifying examination within the University.

4. The scholar is required to pursue research in some branch of chemistry or pharmacy in the University of Leeds, under the direction of the head of the department, and to present a report of his work, such report to be sent to the Registrar before 1 June.

5. The appointment will be made at the end of the third term.

*The Brotherton Research Scholarship*

1. The late Baron Brotherton of Wakefield bequeathed a sum of £20,000 to be devoted to charitable and educational purposes in the City of Leeds, and of this sum the executors in consultation with the Lord Mayor of Leeds have allocated £2,500 for the foundation of a research scholarship in some branch of industrial science, preferably industrial chemistry.

2. The scholarship will be known as 'The Brotherton Research Scholarship', and will in general be of the value of not more than £100. It will be awarded for a period of one year for an approved course of research at a British university and be open to men and women who have attended a Leeds school for a period of at least three years immediately prior to entering a university. Candidates must have graduated with Honours and have shown special capacity to profit by a period of research. Students who have not already graduated but who are taking their final Honours degree examination in the year of award may submit applications.

3. The scholarship will be awarded by a committee, to be known as the Brotherton Research Scholarship Committee, and including representatives of the City of Leeds and of the University.

4. The committee will take into account the university records of the candidates and the course of research proposed to be followed, and the award shall be subject to the committee's approval of the proposed course and of the university at which it is to be undertaken.

5. The committee will have the right to terminate the tenure of the scholarship at any time if, in the opinion of the committee, the conduct of the scholar is not satisfactory, and thereafter to withhold further payments to the scholar.

6. The emoluments of the scholarship will be payable in instalments at the beginning of each university term.

7. In exceptional circumstances the tenure of the scholarship may be extended to a second year.

8. If in any year the committee shall be of opinion that none of the candidates has attained an adequate standard it may refrain from making an award in that year.

9. Any income remaining unspent at the end of any year may at the committee's discretion be either added to the capital sum or reserved for use in making additional payments to scholars.

10. If at any time the sum at the disposal of the committee is greater than that required for the emolument of a single scholar it may award a second scholarship of such value as it may think fit.

11. Applications may be sent, not later than 31 May in any year, to the Registrar of the University of Leeds, or to the Chief Education Officer of the City of Leeds, Education Department, Calverley Street, Leeds.

### *The Clothworkers' Research Fellowships and Scholarships in textile industries*

1. The scholarships and fellowships were instituted in 1928 from funds provided by the Worshipful Company of Clothworkers.

2. The scholarships are of the annual value of £190–£220 together with tuition fees. The fellowships are of the minimum annual value of £200 plus fees.

3. The scholarships are open to graduates of the University of Leeds, to holders of the diploma in textile industries of the University of Leeds, and to suitably qualified graduates of other universities.

4. The fellowships will normally be awarded to holders of scholarships who have shown special aptitude for research work during their tenure of a scholarship but any duly qualified applicant may be granted a fellowship on the ground of exceptional distinction without having previously held a scholarship.

5. Both scholarships and fellowships are tenable for one year and may be renewed for one or more years.

6. The number of each to be awarded in any year will depend upon the funds available and on the number of suitable applicants.

7. Fellows and scholars will be required to devote the whole of their time to research in some subject or subjects connected with the textile industries, under the direction of the professor of textile industries, and to present a report of their work to the Senate not later than 1 June in each year.

8. The appointments will be made at the end of the third term.

### *The Clothworkers' Research Fellowships and Scholarships in colour chemistry*

1. The scholarships and fellowships were instituted in 1928 from funds provided by the Worshipful Company of Clothworkers.

2. The scholarships are of the annual value of £180 together with tuition fees. The value of the fellowships is assessed in the light of the candidates' qualifications and experience.

3. The scholarships are open to suitably qualified graduates of any university, but preference will be given to graduates of the University of Leeds who have graduated with Honours in colour chemistry or have obtained the ordinary degree of Bachelor of Science in dyeing.

4. The fellowships will normally be awarded to holders of scholarships who have shown special aptitude for research work during their tenure of a scholarship but any duly qualified applicant may be granted a fellowship on the ground of exceptional distinction without having previously held a scholarship.

5. Both scholarships and fellowships are tenable for one year and may be renewed for one or more years.

6. The number of each to be awarded in any year will depend upon the funds available and on the number of suitable applicants.

7. Fellows and scholars will be required to devote the whole of their time to research in the department of colour chemistry and dyeing under the direction of the head of the department and to present a report of their work to the Senate, such report to be sent to the Registrar not later than 1 June each year.

8. The appointments will be made at the end of the third term.

### *The Coal Tar Research Association Scholarships*

1. Two scholarships, each of the value of £325 a year, have been provided by the Coal Tar Research Association, and will be awarded annually by the Senate on the recommendation of the Livesey professor of coal gas and fuel

industries to candidates qualified to prosecute research at postgraduate standard on subjects connected with the coal tar industry.

2. In making his recommendation the professor will consult the Coal Tar Research Association, but the award of the scholarship will ultimately rest with the Senate.

3. The scholarships will normally be awarded to students who have a good Honours degree in fuel, chemistry, physics or any subject related to chemical technology, but in exceptional circumstances the Senate may make the awards to non-graduates.

4. In general, the scholarships will be tenable for two years, but the Senate may, on the recommendation of the professor, extend the tenure of an award.

5. Holders of the scholarships will be required to spend the whole of their time, excluding the usual vacations, in study and research work, normally within the University. The work will be concerned with subjects connected with the coal tar industry, and will be chosen and directed by the professor, after consultation with the Coal Tar Research Association.

6. All facilities for research provided within the department of coal gas and fuel industries in the University will be available to the holders of the scholarships, and in recognition of this the Coal Tar Research Association will pay an annual fee of £50 during the tenure of each scholarship.

7. A report on the research work carried out by each scholar shall be submitted to the Senate and also to the council of the Coal Tar Research Association on or before 1 June each year together with copies of any papers which may be published in connection with the research.

8. Results of the investigations of scholars shall be published in the most suitable manner, but the investigators are not permitted to make commercial use of their results without the consent in writing of the Coal Tar Research Association and the Department of Scientific and Industrial Research.

9. The scholarships will be awarded annually during June or July after due advertisement has been made in appropriate journals. Applications for the scholarships must reach the Registrar not later than 1 June each year.

*The Arthur Crockatt Studentships*

1. In 1962 the National Federation of Dyers and Cleaners gave to the University the sum of £3,000, which had been raised by voluntary subscription from its members in commemoration of the services to the industry of Arthur John Crockatt who graduated from the University of Leeds in 1914.

2. The amount available annually is approximately £150.

3. The primary purpose of the studentships is to give financial assistance to students in the department of colour chemistry and dyeing who may be in need of it, or to help such students to undertake research in the department of colour chemistry and dyeing for a period of up to twelve months.

4. If in any year the total sum available is not required for the primary purpose, the surplus income may be applied under the provisions of clause 3 to students in the department of textile industries.

5. If in any year the total sum available is not required under the provisions of clauses 3 and 4 it may be used to enable students in the department of colour chemistry and dyeing and in the department of textile industries to attend the annual conferences of the British Association, the Faraday Society, the Society of Dyers and Colourists or the Textile Institute, or any other meetings approved by the heads of the departments of colour chemistry and dyeing, or of textile industries.

6. The awards shall be made by the Senate on the recommendation of the appropriate head of the department.

*Dr. Walter Hargreaves Studentship*

1. The studentship was endowed with £1,250 in 1944 by the shareholders of Henry Briggs, Son & Company Limited, as a testimonial to Dr. Walter Hargreaves on his retirement from the Chairmanship of the Company.

2. The annual value of the studentship is approximately £40.

3. The award is tenable in the department of applied mineral sciences.

4. The award will be made to a research student or research assistant working on an approved subject relating to the working, production or treatment of coal.

5. The award shall be used to help in defraying the student's expenses in visiting industrial and/or research establishments.

6. If the head of the department of applied mineral sciences so recommends, the amount of the studentship may be used instead for the purchase of equipment relating to the working, production or treatment of coal.

7. The award of the studentship shall be made by the Senate on the recommendation of the head of the department of applied mineral sciences.

*The Hickson and Welch Research Scholarship*

1. The scholarship, of the value of £300 a year, was established in 1952 by wish of Mr. Bernard Hickson, a former student of the University and chairman and managing director of Messrs. Hickson & Welch Ltd., chemical manufacturers, Castleford.

2. The scholarship will be awarded by the Senate on the recommendation of the head of the department of colour chemistry and dyeing after consideration of the results of the final examination for the degree of Bachelor of Science. Preference will be given to candidates who graduate with Honours in colour chemistry.

3. The scholar will be required to devote his whole time to research in some branch of colour chemistry in the department of colour chemistry and dyeing.

4. The award will be made for one year in the first instance, but may be renewed for not more than two further years.

5. Applications should reach the Registrar not later than 31 May each year.

*Lawrence Ingle Scholarship*

1. This scholarship was instituted in 1961 by Mr. Lawrence Ingle for the promotion of research in leather science.

2. The scholarship will normally have an annual value of £500 from which fees will have to be paid.

3. The scholarship will be awarded by the Senate, on the recommendation of the Procter professor of food and leather science, to a candidate who has graduated with Honours in the department of food and leather science, or exceptionally to some other suitably qualified graduate of the University of Leeds or of another approved university.

4. The scholarship is tenable for one year in the first instance and may be renewed for one further year.

5. The scholar is required to pursue full-time research in leather science in the University under the direction of the Procter professor of food and leather science.

6. Limited assistance will be given to enable the scholar, on the recommendation of the Procter professor, to travel in furtherance of his studies.

7. Applications should reach the Registrar preferably not later than 30 June each year, but later applications may be considered.

*The International Wool Secretariat Scholarships*

1. The scholarships were instituted in 1945 from funds provided by the International Wool Publicity and Research Secretariat for the encouragement of research in the wool industry.

2. The scholarships, which are of the annual value of £300, are open to graduates of the University of Leeds and suitably qualified graduates of other universities, to holders of the diploma in textile industries of the University of Leeds, and to Fellows and Associates of the Textile Institute.

3. The scholarships are tenable for one year and may be renewed for one or more years, but the number awarded in any one year will depend upon the funds available and upon the number of suitable applicants.

4. Scholars will be required to devote the whole of their time to research on an approved subject concerned with the constitution and properties of wool, or the processes of the wool textile industry, and to present a report on their work to the Senate not later than 1 June each year.

5. The appointment will be made by the Senate, on the recommendation of a committee appointed for the purpose, at the end of the third term. Applications should be in the hands of the Registrar not later than 1 May each year.

*The Leather Industry Scholarships*

1. These scholarships were instituted in 1961 by the British Leather Manufacturers' Research Association for the promotion of research in leather science.

2. The scholarships will normally have an annual value of £450 in addition to tuition fees.

3. The scholarships will be awarded by the Senate, on the recommendation of the Procter professor of food and leather science, to candidates who have graduated with Honours in the department of food and leather science, of exceptionally to other suitably qualified graduates of the University of Leeds or of other approved universities.

4. The scholarships are tenable for one year in the first instance and may be renewed for one further year.

5. Scholars are required to pursue full-time research in leather science in the University under the direction of the Procter professor of food and leather science.

6. Limited assistance will be given to enable the scholars, on the recommendation of the Procter professor, to travel in furtherance of their studies.

7. Applications should reach the Registrar preferably not later than 30 June each year, but later applications may be considered.

### *The Arthur Smithells Scholarship*

1. The scholarship was founded in 1926 from the balance, amounting to £2,079, of a fund raised to commemorate the services rendered to the University by the late Emeritus Professor Smithells, professor of chemistry from 1885 to 1924. Its object is the elucidation by scientific research, in any department of the University, of the phenomena of combustion in the widest sense.

2. The scholarship, of the approximate annual value of £100, is tenable in the first instance for one year, and may be renewed for a similar period or periods. The appointment is made at the end of the third term.

3. The scholarship is open to graduates of the University. All candidates are required, when sending in their applications, to specify the subject in which they propose to undertake research.

4. The scholar is required to pursue research in a department of the University of Leeds, under the direction of the head of the department, and to present a report of his work, such report to be sent to the Registrar before 1 June.

### *The Freeman Fund*

1. The late Mr. Robert Aspin Freeman bequeathed to the University the sum of £1,150 and expressed the desire that this bequest should be used to promote the study and investigation of digestion and disorders of digestion and that the bequest should be known as the Freeman Fund.

2. The annual income of the bequest will be used as a fund for the payment of expenses incurred in approved research on digestion or disorders of digestion. Any unexpended balance will be allowed to accumulate and will be used either for research expenses or in payment of the emoluments of a research worker. Applications must be submitted to the Registrar normally before 1 September.

### *The Legg Travelling Scholarship*

1. The Legg travelling scholarship was founded in 1948 by a gift of £2,000 from the trustees of the late Mr. Thomas Legg, made in memory of his association with the school of medicine of the University of Leeds.

2. Awards will normally be made in every third year. The first award was made in 1952. If no candidate is regarded as of sufficient merit, no award shall be made and the scholarship shall be offered in the following year. Any accrued income may be added to the capital funds of the scholarship.

3. The scholarship, of the value of approximately £160, is tenable for six months during which the holder will study at one or more approved centres other than Leeds either in this country or abroad.

4. The scholarship will normally be awarded only to candidates who have held a registrable medical qualification for not less than two years and not more than seven years at the time of the award.

5. The scholarship is open to both men and women. Candidates must be holders of an appointment of demonstrator in the school of medicine in the University of Leeds or holders of an appointment of registrar in one of the teaching hospitals associated with the University or holders of an appointment of similar status elsewhere, provided that they have been students in the University for a period of not less than three years.

6. Other things being equal, preference will be given to applicants wishing to undertake advanced study or research in one of the clinical branches of medicine.

7. The scholarship will be awarded by the Senate on the recommendation of a committee consisting of the dean and the professorial members of the Faculty of Medicine, together with the chairman of the scholarships committee.

8. Applications, giving particulars of the candidate's age, experience and qualifications, together with a programme of the study proposed, should be received by the Registrar not later than 1 May.

### *The Lady Moynihan Scholarship*

1. The scholarship is endowed by means of a fund provided in 1939 by the family of the late Lord and Lady Moynihan in memory of Isabella Wellesley, Lady Moynihan of Leeds.

2. A scholarship of the approximate value of £60 is awarded every alternate year to a student or graduate of the University who proposes to undertake some approved clinical investigation.

3. Candidates must be graduates of this University or qualified medical men or women who have been students of the University for not less than three years.

4. Each applicant must submit a detailed statement of the investigation which he proposes to undertake and must state also the department of the University in which he desires to work.

5. Holders of the scholarship will be required to devote the whole of their time to their research unless with the express permission of the professor under whom they are working. On completion of their tenure of the scholarship they will be required to submit a report on their work to the Registrar.

6. The award will be made by the Senate on the recommendation of the Board of the Faculty of Medicine. Applications should be in the hands of the Registrar by 1 May each year.

# REGULATIONS FOR FELLOWSHIPS

## *The Sir Swire Smith Fellowship*

1. The fellowship commemorates the services rendered to national education by the late Sir Swire Smith, Doctor of Laws *honoris causa*, a member of the Court of the University, Member of Parliament for Keighley, and a member of the Royal Commission on educational instruction, 1881-4.

2. For its endowment a sum of about £3,000, collected by public subscription chiefly through the efforts of Sir John Clough and Mr. Augustus Spencer, was placed in the hands of the University in May, 1920, to be held in trust for the maintenance of a fellowship.

3. The fellowship is awarded to a graduate in any Faculty of the University who has given evidence of qualifications for undertaking advanced work.

4. The award as a rule is biennial. The fellowship is tenable for two years and the holder is required to undertake and pursue a course of advanced study and research approved by the Senate.

5. The annual value of the fellowship is not less than £150 [and may be increased to the value of a State Studentship awarded by the Ministry of Education].

6. The award of the fellowship is made ordinarily in the month of June. Applications must reach the Registrar on or before 1 May preceding the date of the award. Each applicant must state the course of study which he proposes to follow and the university or other institution for research to which he proposes to attach himself during the tenure of the fellowship.

7. The fellow is required to devote the whole of his time to the pursuit of the research in question, and to present a report of the work done to the Senate, such report to be sent to the Registrar before 1 June of the year following the award of the fellowship. At the expiration of the full period of tenure a final report shall be submitted to the Senate.

## *The Charles Edwyn Vaughan Fellowship*

1. The late Emeritus Professor C. E. Vaughan bequeathed to the University a sum of £3,500 for investment for the purpose of founding a postgraduate research fellowship.

2. The annual value of the fellowship will be not less than £150 [and may be increased to the value of a State Studentship awarded by the Ministry of Education]. The fellowship is awarded to such graduates in the departments of English, history or economics, as shall be judged the most fit and proper to receive it, and to be capable of undertaking special research in English, or history, or economics.

3. The award as a rule is made every two years. The fellowship is tenable for two years and the holder is required to undertake and pursue a course of research approved by the Senate

4. The award of the fellowship is made ordinarily in the month of June. Applications should reach the Registrar on or before 1 May preceding the date of the award. Each applicant must state the course of study which he proposes to follow and the university or other institution for research to which he proposes to attach himself during the tenure of the fellowship.

5. The fellow is required to devote the whole of his time to the pursuit of the research in question, and to present a report of the work done to the Senate, such report to be sent to the Registrar before 1 June of the year following the award of the fellowship. At the expiration of the full period of tenure the holder shall submit a final report to the Senate.

6. In the event of no candidate of sufficient merit and distinction presenting himself in any year, the interest available for that year will be expended in the purchase of books for the libraries in the departments of English, history and economics.

### *The Ackroyd Memorial Fellowship*

1. By a deed executed in 1918, in memory of the late J. E. Ackroyd, Esq., the relatives of Mr. Ackroyd placed in the hands of the University a sum of £4,000 to be held in trust for the maintenance of a scholarship or fellowship for the promotion of research work for the furtherance of the textile industry of the West Riding of Yorkshire.

2. In accordance with the provisions of the trust deed a fellowship entitled the 'James Edmondson Ackroyd Fellowship' of the value of not less than £150 per annum will be awarded by the Senate on the recommendation of the Board of the Faculties of Science and Technology.

3. The fellowship shall ordinarily be awarded for a period of three years, which may be extended by a special resolution of the Senate for a further period not exceeding three years.

4. The fellow shall be required to devote his whole time to the prosecution of research on some subject or subjects approved by the Board of the Faculties of Science and Technology, bearing upon the production of wool, silk or other textile materials, or the manufacture of textile fabrics.

5. A committee shall be appointed by the Board of the Faculties of Science and Technology to exercise a general supervision over the conduct of the research.

6. In the award of the fellowship preference will be given to graduates in science or technology but the essential qualification shall be capacity to pursue the research proposed and it shall be in the power of the Senate to award the fellowship to a suitable candidate although he is not a member of the University. Other things being equal, preference will be given to candidates born in the City of Bradford or resident there for a period of not less than five years immediately before the date of the appointment.

7. The award of the fellowship will be made ordinarily in the month of June. Applications for the fellowship should be made to the Registrar on or before 1 May.

8. Grants out of the surplus moneys of the fund may be made by the Senate on the recommendation of the Board of the Faculties of Science and Technology to increase the value of the fellowship in any year, or to provide additional facilities for prosecution of the research by the fellow.

9. Provisional reports of the research conducted by the fellow shall be laid by the supervising committee before the Senate on or before the completion of each year of tenure of the fellowship. At the expiration of the full period of tenure a final report shall be submitted to the Senate, together with copies of any papers published in connection with the research.

*The British Coke Research Fellowship*

1. The fellowship, of the value of £350 a year, is provided by the British Coke Research Association, and will be awarded annually by the Senate on the recommendation of the Livesey professor of coal gas and fuel industries, to a candidate qualified to prosecute research at postgraduate standard on a subject connected with the coke industry. Preference will be given to persons wishing to enter the coke oven industry, or in the absence of such, to those intending to engage in some other branch of the fuel industry.

2. In making his recommendation the professor will consult the British Coke Research Association, but the award of the fellowship will ultimately rest with the Senate.

3. The fellowship will normally be awarded to a student who has a good Honours degree in fuel, chemistry, physics, or any subject related to fuel technology but in exceptional circumstances the Senate may make the award to a non-graduate.

4. In general the fellowship will be tenable for one year but the Senate may, on the recommendation of the professor, renew the award to the holder for not more than one further period of one year instead of proceeding to a fresh election.

5. The holder of the fellowship shall undertake to spend the whole of his time, excluding normal vacations, in study and research work within the University under the direction of the professor on some subject connected with the coke oven industry. The selection of the subject and the direction of the work shall be left to the discretion of the professor after consultation with the British Coke Research Association.

6. All facilities for research provided within the Houldsworth School of Applied Science in the University will be available to the holder of the fellowship and in recognition of this the British Coke Research Association will pay an annual fee of £50 to the University during the tenure of the fellowship.

7. A report on the research work carried out by the fellow shall be submitted to the Senate and also to the Council of the British Coke Research Association on or before 1 June each year together with copies of any papers which may be published in connection with the research.

8. Results of the investigations of fellows shall be published in the most suitable manner but the investigators are not permitted to make commercial

use of their results without the previous consent in writing of the British Coke Research Association and the Department of Scientific and Industrial Research.

9. The fellowship will be awarded annually during June or July after due advertisement has been made in appropriate journals. Applications for the fellowship must be addressed to the Registrar and should reach him on or before 1 June.

### *The Henry Ellison Fellowship*

1. The Henry Ellison research fund, endowed in 1943 by Mr. Henry Ellison of Calverley, Leeds, is for the promotion of research in pure and applied chemistry and in physics in the University.

2. The fellowships are of an annual value of about £450 plus fees, restricted to graduates of the University and normally tenable for three years; they are intended to enable promising graduates to gain a training in scientific research.

3. Any income not expended in any year may be added to the capital of the fund.

### *The Gas Research Fellowship*

1. The fellowship, of the value of £600 a year provided by the Institution of Gas Engineers, will be awarded by the Senate, on the recommendation of the Board of the Faculties of Science and Technology, to a duly qualified candidate for the prosecution of postgraduate research in chemical or chemical engineering aspects of fuels.

2. The award of the fellowship will be made annually during the month of June, after due advertisement in the technical press and other appropriate journals.

3. It will always be within the power of the Senate, on the recommendation of the Board of the Faculties of Science and Technology, to renew the fellowship to the holder for a further period of a year, instead of proceeding to a fresh election.

4. The holder of the fellowship shall undertake research in the University under the direction of the Livesey professor of coal gas and fuel industries on some subject connected with the chemistry of gases and combustion. The selection of the subject, and the method of carrying on the work, will be left to the judgment of the professor responsible for its direction.

5. The University will provide, free of charge, all reasonable accommodation facilities required for the prosecution of the research undertaken by the holder of the fellowship, including working space and the use of such instruments and appliances installed as part of the equipment of the department of gas engineering and general fuel science. Any special expenses, not exceeding £75, incurred during the prosecution of the research will be defrayed by the Institution of Gas Engineers.

6. A report of the research work carried out by the holder of the fellowship shall be submitted to the Council of the Institution of Gas Engineers, as well as to the Senate of the University, on or before 1 May each year, together with copies of any papers published in connection with the research.

*The Imperial Chemical Industries Ltd. Research Fellowships*

1. Six fellowships have been instituted by Imperial Chemical Industries Ltd., for research in bacteriology, biochemistry, biomolecular structure, botany (plant biochemistry and biophysics), chemical engineering, chemistry, leather science, food science, chemotherapy, colour chemistry and dyeing, engineering (civil, electrical or mechanical), fuel and refractories, geology (including geochemistry), metallurgy, mining (selective flotation and geophysical surveying), pharmacology, physics, physiology, textile industries [chemistry of high polymers (keratin and man-made fibres), textile technology and textile engineering].

2. Appointments to these fellowships will take effect on 1 October. The normal tenure of a fellowship will be for three years and may be renewed for one or more years. The question of renewing a fellowship will normally be considered towards the end of the second year of tenure.

3. The normal value of each fellowship will be between £950 and £1,200 a year but the University at its discretion may fix a different stipend. The stipend of a particular candidate will depend on his qualifications. In appropriate cases fellows will be admitted to the Federated System of Superannuation for Universities, and any necessary adjustments in their stipends will be made.

4. The fellowships are open to men and women who have already had experience of postgraduate research; other things being equal, preference will be given to candidates under twenty-eight years of age on taking up the appointment. There is a general expectation that all I.C.I. fellows should have obtained a Ph.D. degree or have had equivalent research experience and that the tenure of a fellowship should not normally be used for studying for a Ph.D. degree.

5. A fellow will be required to undertake a limited amount of teaching.

*The Procter Memorial Fellowship*

1. The Procter memorial fellowship was established by the International Society of Leather Trades Chemists to commemorate the services of the late Emeritus Professor H. R. Procter to the science of leather manufacture, the endowment fund being subscribed by members of the society and of the leather and allied trades.

2. The value of the fellowship is between £700 and £1,000 a year.

3. The award of the fellowship is made annually by the Senate in June on the recommendation of the Procter fellowship committee after due advertisement in the Journal of the Society of Leather Trades Chemists. Normally, the person appointed to the fellowship will be a graduate in leather chemistry or possess an equivalent qualification of an institution of university status.

4. The fellow, who may be of any nationality, will be appointed for a period of one academic year, but the committee has power to recommend that the holder be reappointed for a further period of not longer than one academic year instead of proceeding to make another appointment.

5. The University undertakes to provide free of charge all reasonable accommodation and apparatus for the prosecution of research which shall be carried out under the direction of the Procter professor of food and leather science. If no election to the fellowship be made in any year the income for that year shall be added to the capital fund.

6. The fellow will be required to devote the whole of his time to research on a subject pertaining to the leather or allied industries.

7. The results of his work must be presented as a report to the Senate and to the Procter fellowship committee.

8. Applications should be in the hands of the Registrar not later than 1 April each year.

### *S.A.T.R.A. Research Fellowship*

1. The fellowship has been established by the British Boot, Shoe and Allied Trades Research Association for the encouragement of research in physics in relation to its problems.

2. The fellowship, normally of the annual value of £450 plus fees is open to suitably qualified graduates of the University of Leeds or other approved universities.

3. The fellowship is tenable normally for two years, renewal being subject to a satisfactory report at the end of the first year. The fellow may apply for acceptance as a candidate for a higher degree.

4. The fellow will be required to devote the whole of his time to research within the University, except in so far as arrangements may be approved for him to carry out parts of his work elsewhere, under the direction of the Procter professor of food and leather science in consultation with the Director of the Research Association.

5. The award will be made by the Senate on the recommendation of the Procter professor of food and leather science.

### *The Yorkshire Agricultural Society Travelling Fellowship*

1. The fellowship was instituted in 1954 from funds provided by the Yorkshire Agricultural Society, with the object of encouraging study and research abroad in subjects in the field of agriculture, including the agricultural sciences.

2. The fellowship, which is intended to cover the cost of travel and research abroad (including subsistence) will not normally exceed £300; it will be tenable for one year and not renewable. It may be awarded by the Senate to a graduate of the University in agriculture (including the agricultural sciences), or to a member of the staff or a postgraduate student of the University in agriculture (including the agricultural sciences) in the department of agriculture. In making the award, consideration will be given to academic distinction as well as to the ability of the candidate to profit by the scheme of study or research proposed.

3. The fellow will be required, during his year of tenure of the fellowship to engage in study or research abroad in the field of agriculture or in the agricultural sciences over a period of not less than three months.

4. Each applicant must present a detailed statement of the proposed scheme of study or research, and an estimate of the cost likely to be incurred in travelling and maintenance during the period to be spent abroad.

5. The fellow will be required, within a period not exceeding eighteen months from the date of the appointment, to submit to the Senate a full and detailed account of his study or researches and this shall be made available, if required, for publication in the *Journal of the Yorkshire Agricultural Society*.

6. Applications should reach the Registrar not later than 1 June each year.

### *The Cancer Research Fellowships*

1. Funds have been made available through the Yorkshire Council of the British Empire Cancer Campaign for the provision of fellowships for the prosecution of cancer research within the University. Four fellowships—the Henry Oxley, the Elizabeth and Louisa Ward, the J. W. Wootton and the Angus Rhodes—are available. They will be tenable for one, two or three years, and may be renewed thereafter for such periods as the Senate may determine.

2. The holders of the fellowships shall work under the direction of the professor of experimental pathology and director of cancer research at such problems in the field of cancer research as he shall determine.

3. The fellows will be required to devote the whole of their time to the prosecution of their researches and to present reports of their work to the Senate unless the results are otherwise published in the form of communications to recognised scientific journals.

4. Fellows appointed for one year must submit a report on their work to the Registrar at the end of that period. Fellows appointed for two years must send an interim report at the end of the first year, and a further report at the end of the second year. Fellows appointed for three years must send interim reports at the end of the first and second years, and a further report at the end of the third year. Similar reports will be required in the event of the renewal of the fellowship. The tenure of the fellowship will be conditional on such reports being satisfactory to the professor of experimental pathology.

5. Appointments to vacant fellowships may be made at any time. Renewals will be made in January or June. Vacancies will be announced as they occur and applications should be lodged with the Registrar.

### *The Centenary and Hardwick Fellowship*

1. The fellowship is endowed by means of the fund collected on the occasion of the centenary of the School of Medicine and by the accumulations of the Hardwick and McGill prize funds.

2. A fellowship of the approximate value of £150 is awarded every alternate year to a student or graduate of the University who proposes to undertake some approved clinical investigation.

3. Candidates must be medically qualified and must have been students of the University for not less than three years.

4. Each applicant must submit a detailed statement of the investigation which he proposes to undertake and must state also the department of the University in which he desires to work.

5. Holders of the fellowship will be required to devote the whole of their time to their research unless with the express permission of the professor under whom they are working. On completion of their tenure of the fellowship they will be required to submit a report on their work to the Registrar.

6. The award will be made by the Senate on the recommendation of the Board of the Faculty of Medicine. Applications should be in the hands of the Registrar by 1 May each year.

### *The Thorp Fellowship in forensic medicine and public health*

1. The annual income of the Thorp fund instituted by the late Dr. Disney L. Thorp, one of the founders of the Leeds School of Medicine, is applied to provide in every alternate year a fellowship of the value of approximately £150 to a student or graduate of the University who proposes to undertake an approved investigation of some subject bearing upon forensic medicine or public health.

2. Candidates must be graduates of the University or qualified medical men or women who have been students of the University for not less than three years.

3. Each applicant must submit a detailed statement of the investigation which he proposes to undertake and must state also the department of the University in which he desires to work.

4. Holders of the fellowship will be required to devote the whole of their time to research unless with the express permission of the professor under whom they are working. On completion of their tenure of the fellowship they will be required to submit a report on their work to the Registrar.

5. The award will be made by the Senate on the recommendation of the Board of the Faculty of Medicine. Applications should be in the hands of the Registrar by 1 May each year.

Regulations governing the award of research fellowships by the University of Leeds Institute of Education will be found on page 760.

# REGULATIONS FOR PRIZES

## *The Goodwin Batterson Beach Prize*

1. The Goodwin Batterson Beach prize was established in 1962 with funds presented by Dr. Goodwin B. Beach in appreciation of the honour conferred upon him by the University of Leeds and in memory of his grandfather James Goodwin Batterson and of Edward Kennard Rand of Harvard University.

2. The prize, which will be of the value of approximately £15, will be awarded annually by the Senate on the recommendation of the head of the department of Latin, for the best composition by a student in Latin verse or prose.

3. All students who are reading for a Bachelor's degree of this University are eligible to compete for the prize by submitting a composition not exceeding 100 lines of verse or 1,000 words of prose. A choice of themes will be announced in June each year for competition in the following year.

4. In the event of two compositions of equal merit being submitted Latin verse will outrank Latin prose.

5. If in any year no candidate is deemed to have submitted a composition of sufficiently high standard the prize will not be awarded but the money will be allowed to accumulate and may be used either to increase the value of the prize or to make additional awards in later years.

6. No student who has once obtained the prize may compete a second time.

7. Compositions should be sent to the Registrar not later than 1 May.

## *The Connal Prize*

1. Emeritus Professor B. M. Connal, on his retirement from the chair of Latin, presented to the University the sum of £125 with the object of establishing a prize in connection with the departments of Latin and Greek. A prize of approximately £4 10s. will be awarded.

2. The prize will be awarded by the Senate on the joint recommendation of the professors of Latin and Greek in June of each year to the most meritorious student placed in the first class in one of the following schools of special studies: classics, Latin, Greek.

3. In making the award, preference will be given to students who have graduated with first class Honours in classics. In the event of no suitable candidate being available in this school, the prize will be given to the most deserving student with first class Honours in the special studies school of Latin, and failing such a candidate, to the most deserving student with first class Honours in the special studies school of Greek.

4. If in any year no candidate is placed in the first class in any of the above-mentioned special studies schools no award will be made, and the unexpended sum, together with any accumulated surplus of dividends, shall form a fund to be used by the Senate to give financial assistance to deserving students in any of these three Honours schools.

### *The Edwards Prize*

1. The Edwards prize was established in 1951 to commemorate Emeritus Professor W. M. Edwards' tenure of the chair of Greek from 1928 to 1950.

2. The prize, of the value of approximately three guineas, will be awarded by the Senate annually in June on the recommendation of the professor of Greek to the most meritorious candidate in Greek in the final examination for the degree of Bachelor of Arts.

3. The prize shall not be awarded to the winner of the Connal prize. Should the candidate best qualified for the Edwards prize be recommended for the Connal prize, the candidate next in order of merit in Greek will be eligible for award of the Edwards prize.

4. The prize shall not be awarded unless a sufficiently high standard is attained. If in any year it is impossible to recommend an award, the interest accruing in that year shall be added to the capital of the fund.

### *The David Forsyth Prize*

1. The sum of £238 was subscribed by past scholars of Dr. David Forsyth, for many years head master of the Leeds Central High School, for the endowment of a Forsyth prize at the University. A prize of £6 will be awarded annually under the following conditions:

2. All students, both men and women, who have completed an Honours course in arts or science with the intention of becoming teachers in high or secondary schools are eligible.

3. Preference will be given to those candidates who have taken their preliminary education in Leeds high or secondary schools.

4. The prize will be awarded by the Senate in June of each year on the results of the examination for the Graduate Certificate in Education.

### *The Gladstone Memorial Prize

1. The trustees of the Gladstone Liberal Memorial Fund have established Gladstone memorial prizes to be given at the universities and university colleges in England, Scotland, and Wales for special proficiency in history, political science and economics. An annual prize of the value of £20 has been offered to and accepted by the Council of the University. The prize will be given either wholly in books, or half in books and half in money, at the option of the prize winner. The prize will be awarded under the following conditions:

2. The prize will be awarded in June of each year for an essay on some subject connected with either history or political science or economics and with some aspect of British policy—domestic, imperial or foreign—in relation to finance or other matters from the beginning of the 19th century onwards to the present time. The subjects of the essays will be announced in the preceding June.

3. It will be open to competition among all students of day classes of the University who are in attendance upon University lectures for not less than four hours per week. Dissertations sent in for the degree of Bachelor of Arts

*This award is in abeyance at present.

with Honours upon subjects connected with history, or political science or economics will be regarded as competing for the essay.

4. No student who has once obtained the prize may compete a second time

5. No essay, in consideration of which either wholly or in part a University fellowship or scholarship shall have been awarded, shall be admissible for other than honorary recognition.

6. The essay must be sent to the Registrar not later than 1 May each year.

### *The Harvey Prize*

1. The Harvey prize was instituted with funds (including a testimonial fund subscribed by members of the University) presented by Emeritus Professor Harvey on his retirement from the chair of philosophy in 1954.

2. The prize, which is of an approximate value of £5, is awarded by Senate annually in June on the recommendation of the professor of philosophy to the first-year undergraduate who achieves the best performance in philosophy as part of his or her degree course.

3. In the event of an award not being made in any year the interest will be added to the capital.

### *The Milne Prize in Celtic studies*

1. The Leeds Caledonian Society, in 1951, gave £300 to endow a prize to promote interest in Celtic studies and to commemorate Emeritus Professor W. P. Milne's long association with the University and with the Society.

2. The prize which is of the value of £9 will be awarded annually by the Senate, on the recommendation of a committee which will include the chairman of the scholarships committee, the professors of English language, French and medieval history, together with such other persons as the committee may deem it necessary to co-opt.

3. All registered students in the University are eligible to compete for the prize by submitting an essay, not exceeding 5,000 words, on some aspect of Celtic studies either prescribed by the committee or selected by the candidate and approved by the committee.

4. In the event of the committee not considering any entry of sufficient merit the prize will be available for award in a subsequent year.

5. Essays must be sent to the Registrar not later than 1 May each year.

### *The Passey Prize in art*

1. The Passey prize in art was instituted in 1954 with funds subscribed as a testimonial to Emeritus Professor Passey who retired from the chair of experimental pathology and cancer research in 1953.

2. The prize, which is of an approximate value of £15, is awarded every *third year for the best original work of art in painting, sculpture, ceramics or graphic art submitted by a full-time student of the University.

*The next award will be made in 1965.

3. The prize shall be awarded by the Senate on the recommendation of the head of the department of fine art.

4. Works submitted must reach the head of the department of fine art not later than 1 May in the year of award.

### *The Ripon English Literature Prize*

1. The committee formed to obtain for the University by subscriptions a portrait of the late Chancellor, The Most Hon. the Marquess of Ripon, *K.G.*, presented to the University the surplus funds amounting to £180, for investment with a view to providing an annual prize in the subject of English literature to be called ' The Ripon English Literature Prize.'

2. A prize of the value of £7 will be awarded annually.

3. The prize will be awarded in June each year for an essay on some subject connected with English literature. The subjects of the essays will be announced in the preceding June.

4. It will be open to competition among all students of day classes of the University who are in attendance upon University lectures for not less than four hours per week. Dissertations sent in for the degree of Bachelor of Arts upon subjects connected with English literature will be regarded as competing for the essay.

5. No student who has once obtained the prize may compete a second time.

6. No essay, in consideration of which, either wholly or in part, a University fellowship or scholarship shall have been awarded, shall be admissible for other than honorary recognition.

7. The essay must be sent to the Registrar not later than 1 May.

8. For the session 1964-5 an essay may be submitted on one of the following subjects:

(a) Originality in the contemporary novel.

(b) The work of a poet writing in a Commonwealth country.

### *The Frank Toothill Prize*

1. The Frank Toothill prize was established in 1956 from the proceeds of a bequest by the late Mrs. Toothill in memory of her husband.

2. The prize will be awarded by the Senate, on the recommendation of the West Riding professor of music, to the music student who is judged to have shown the greatest merit in the course of his first year at the University, provided that no award be made in any year unless a sufficiently high standard is attained.

3. The prize is open to special studies (music) students and to those general studies students who intend to continue a course in music for a further two years.

4. The prize will be of the value of £50, of which £25 is to be devoted to the purchase of musical scores or books on music.

*The Dorothy Wharton Memorial Prize*

1. A fund of £206 was subscribed by scholars and friends of the late Miss Dorothy Wharton, for many years geography mistress at Leeds Thoresby High School, for the purpose of encouraging the study of geography in the University. The annual income from the fund is approximately £8, and a prize of this amount, or its equivalent in books, will ordinarily be awarded each year, upon the recommendation of the head of the department, to the most meritorious woman student of those who have taken:

(a) Part 1 or part 2 of the final examination for the degree of Bachelor of Arts in special studies in geography;

*or* (b) The examination on the two-year course in geography leading to the degree of Bachelor of Arts in general studies;

*or* (c) The examination on two General courses in geography leading to the degree of Bachelor of Science in general studies.

2. The prize shall not be awarded unless a sufficient standard of merit has been attained.

3. If in any given year no recommendation is made, the interest on the money shall be allowed to accumulate and used to supplement the income in a subsequent year or years.

*The Lucy Whitmell Prize*

1. The late Mr. Charles T. Whitmell presented to the University the sum of £100 for investment, with a view to establishing a prize in Italian language and literature in memory of his late wife. A prize of the value of £5 will be awarded annually, under the following conditions:

2. The prize will be awarded in June each year for an essay on some subject in Italian connected with the life, works and times of Dante, the choice of a subject being left to the individual candidate.

3. It will be open to competition among all students of the University, including students in attendance on extra-mural courses under the supervision of the University.

4. No student who has once obtained the prize may compete a second time.

5. No essay, in consideration of which, either wholly or in part, a University fellowship or scholarship shall have been awarded, shall be admissible for other than honorary recognition.

6. The essay must be sent to the Registrar not later than 1 May.

*The Williamson Travel Bursary*

1. Emeritus Professor A. V. Williamson on his retirement in 1953 presented to the University the sum of £191, being the amount of a testimonial fund subscribed by colleagues and friends to commemorate his thirty-one years service in the department of geography in the course of which he came to be the first holder of a chair in the subject at Leeds. In accordance with the wishes of the donor the interest on the fund is used to assist students in geography to travel outside the British Isles.

2. The bursary, of the value of approximately £10, will be awarded by Senate on the recommendation of the head of the department of geography to a student reading (a) for the degree of Bachelor of Arts or Bachelor of Science in special studies in geography, or (b) for the degree of Bachelor of Arts or Bachelor of Science in general studies in which geography is taken as a three-year subject.

3. The bursary will be offered in June every alternate year, commencing in 1957. If in any year no recommendation is made the interest accruing in that year may be used to supplement the amount of the bursary awarded in a subsequent year.

### *The Brindley Prize*

1. The prize, of the value of five guineas, was established in 1962 by R. P. Brindley and Company Limited.

2. It shall be awarded annually to the undergraduate with the best result in the second-year examinations in industrial management subjects, including the field project which students undertake in industry. If in any year there is no student of sufficient merit, the prize will not be awarded but may be available for award in a subsequent year.

### *The Gerald Veale Prize*

1. The Gerald Veale prize was established in 1951 as a memorial to Gerald Cater Veale, Doctor of Laws *honoris causa,* and a Fellow of the Institute of Chartered Accountants who was Pro-Chancellor of the University from 1946 to 1949, chairman of the finance committee from 1940 to 1946 and for 23 years a member of the Council.

2. The prize, which will be of the value of approximately £9, will be awarded annually by the Senate after consideration of the results in the final examination for the degree of Bachelor of Commerce.

3. All candidates for the degree of Bachelor of Commerce with accountancy as a principal subject will be eligible for the award. Other things being equal, preference will be given to a candidate who is articled to a chartered accountant but failing such a candidate preference will be given to any other articled pupils taking the course.

4. The prize will not be awarded unless a sufficiently high standard is attained. If in any year it is impossible to recommend an award, the interest accruing in that year shall be added to the capital of the fund.

### *The Wheeler Memorial Fund*

1. A sum of approximately £30 is available each year to provide three prizes of books from a fund instituted in 1946 to commemorate the services to the University and the practical interest in the social work of the city of Leeds of Archibald Edward Wheeler, Registrar from 1912 to 1944.

2. The endowment of £1,000 was provided by contributions from members of the Leeds Luncheon Club, the Leeds Rotary Club, the University and the Leeds Young Men's Christian Association.

3. A prize will be awarded annually by the Senate on the recommendation of the head of the department of social studies to each of the following:

(a) to a student in the Faculty of Economic and Social Studies, taking sociology and politics in the first-year examination;

(b) to a student taking the final examination for the degree of Bachelor of Arts in special studies in sociology or in political studies or in combined studies of which sociology or politics form a part;

(c) to a student taking the examination for the diploma in social studies;

provided that any of these awards may be withheld if none of the candidates attains a sufficiently high standard.

*The Batt Prize*

1. The Batt prize was established in 1962 with funds presented by Mrs. A. H. Batt in memory of her husband K. F. Batt, a student in the department of law from 1959 to 1962.

2. The prize, which will be of the value of approximately £5, will be awarded annually by the Senate on the recommendation of the head of the department of law, to the most meritorious candidate in the final examination in criminal law.

3. If in any year no candidate is deemed to have reached a sufficiently high standard the prize will not be awarded and the interest accruing in that year will be added to the capital of the fund.

*Margaret Simpson Harrison Prize*

This prize shall consist of money or books to the value of £10, and will be awarded by the Senate on the recommendation of the head of the department of law to the most successful candidate in the examination held for second-year students for the degree of Bachelor of Laws provided that no such prize will be awarded unless the examiners are satisfied that there is a candidate of sufficient merit to justify the making of an award.

*Margaret Simpson Harrison Graduation Prizes*

These prizes shall consist of money or books to the value of £5 each, and will be awarded by the Senate on the recommendation of the head of the department of law to the most successful candidate in each of the following subjects of the final examination for the degree of Bachelor of Laws:

Common law (contract and torts)
Equity
Jurisprudence
Land law

No prize will be awarded unless the examiners are satisfied that there is a candidate of sufficient merit to justify the making of an award.

*The Hughes Law Prizes*

1. Upon the retirement, in 1951, of Professor J. D. I. Hughes, a fund was raised by contributions from former students, colleagues and members of the legal profession.

2. In accordance with the wishes of Professor Hughes, the income is used by the Senate for making awards as follows:

(a) A prize of law books not exceeding the value of £5, to be awarded on the results of the examination held at the end of the first year course for the degree of Bachelor of Laws.

(b) A prize not exceeding the value of £10, to be awarded on the results of the final examination for the degree of Bachelor of Laws, provided that only students who have been awarded Honours in that examination are eligible for the prize.

(c) A special award, the holder of which shall be known as the Hughes prizeman, to be made in recognition of an exceptionally good performance in the final examination for the degree of Bachelor of Laws. The value of this award in any year will be fixed by the Senate and will vary according to the total income (including any accumulated income) after providing for the prizes in (a) and (b) above; it will in no case be less than £10. In any year when a Hughes prizeman is elected, the final Honours LL.B. prize (see (b) above) may be awarded to another candidate.

3. The awards will be made by the Senate on the recommendation of the examiners, but none of the above prizes or the special award shall be made in any year unless there are candidates adjudged to be of sufficient merit.

4. Income not expended in any year shall be accumulated.

### *The Brodetsky Prize*

1. Emeritus Professor S. Brodetsky, on his retirement from the chair of applied mathematics in 1948, presented to the University a sum of £200 to be invested for the purpose of establishing a prize in mathematics.

2. The prize will be awarded by the Senate on the recommendation of the head of the department of mathematics to the student whose work in the final examination of the special studies school of mathematics is judged to be of the greatest merit.

3. Part or all of the award of the value of approximately £6 shall be used for the purchase of books.

4. The prize will not be awarded in any year unless a sufficiently high standard is attained and in the event of no recommendation being made, the interest on the money shall be added to the capital of the fund.

### *The J. B. Cohen Prize*

1. The prize was instituted in 1926 for the encouragement of chemical research from the proceeds of a fund raised to commemorate the services of Julius Berend Cohen in the department of organic chemistry as lecturer from 1891 to 1904, and professor from 1904 to 1925.

2. It is awarded annually by the Senate, on report from the professors of organic chemistry and of inorganic and physical chemistry, to that successful candidate for the degree of Doctor of Philosophy or Master of Science whose thesis or dissertation shall have been adjudged to contain the most valuable contribution to knowledge in the subject of chemistry.

3. The Senate reserves the right to withhold the award of the prize in any year if no thesis or dissertation of sufficient merit has been presented.

4. The value of the prize is approximately £8.

*The H. M. Dawson Prize*

1. The Dawson prize was established in 1956 to commemorate the services to the University of Leeds of the late Professor H. M. Dawson, from a fund subscribed by his former colleagues, students and friends.

2. The prize, of the value of approximately £10, will be awarded annually by the Senate on the recommendation of the professor of physical chemistry to an undergraduate or to a student registered for a higher degree of the University for outstanding work in physical chemistry.

3. The prize shall not be awarded unless a sufficiently high standard is attained.

*The Foyle Prize*

1. The prize, which was instituted in 1927 by Messrs. W. G. Foyle, booksellers, London, is offered for award each year and consists of books to the value of £5.

2. The prize will be awarded in May for an essay on some subject connected with the scientific method and the general development of science. The subjects of the essays will be announced in the preceding October.

3. The prize is open to competition among all full-time students of the University save that no student who has obtained the prize may compete a second time.

4. No essay in consideration of which either wholly or in part, a University scholarship or prize shall have been awarded, shall be admissible for other than honorary recognition.

5. The essay must be sent to the Registrar not later than 1 April.

*The Whiddington and Stoner Prizes*

1. The Whiddington prize was established in 1953 from the proceeds of a fund raised to commemorate the services of Richard Whiddington as Cavendish professor of physics from 1919 to 1951. The Stoner prize was established in 1964 from the proceeds of a fund raised to commemorate the services of Edmund Clifton Stoner as professor of theoretical physics from 1939 to 1951 and Cavendish professor of physics from 1951 to 1963.

2. The prizes will be awarded by the Senate on the recommendation of the chairman of the department of physics, to the students graduating with Honours (in courses in which physics is a major subject) whose work is judged to be of the greatest merit, provided that a sufficiently high standard is attained.

3. Normally one Whiddington prize and one Stoner prize will be awarded each year, but the prizes will not be awarded to the same student. In awarding the Whiddington prize emphasis will be given to ability in experimental physics, and for the Stoner prize to ability in theoretical physics.

4. The awards will be each of the value of approximately £10 and shall be used for the purchase of books.

5. When an award is not made in any year the income will be added to the capital.

*The Whytlaw-Gray Prize*

1. Emeritus Professor R. W. Whytlaw-Gray, on his retirement from the chair of inorganic chemistry, presented to the University the sum of £162 for the endowment of a prize to the value of approximately £4.

2. The prize will normally be awarded annually by the Senate on the recommendation of the professors of chemistry to the student who, in their opinion, is the most outstanding graduate of the year in the school of special studies in chemistry.

3. If in any year no candidate is deemed to be of a sufficiently high standard, the prize will not be awarded but the money will be allowed to accumulate for future use.

*The Avery Prizes in mechanical engineering*

1. Three Avery prizes in mechanical engineering were instituted in 1964 by Messrs. W. & T. Avery Limited.

2. *The First and Second Year Avery Prizes.*

Two Avery prizes in mechanical engineering, each of the value of £12 10s., will be awarded annually by the Senate on the recommendation of the head of the department of mechanical engineering, to those students (one from the first-year course and one from the second-year course in mechanical engineering) deemed to be the best students in the respective courses.

3. *The Avery Graduation Prize.*

The Avery graduation prize in mechanical engineering, of the value of £25, will be awarded annually by the Senate, on the recommendation of the head of the department of mechanical engineering, to the student who, in his final year of the mechanical engineering course, is deemed to be of sufficient merit and who has completed project work of outstanding quality.

4. If in any year no candidate for any of the prizes is deemed to be of sufficient merit, the prize or prizes will not be awarded.

5. In the event of there being two candidates of indistinguishable merit, the prize in question will be divided.

*The Barker Prize Fund*

1. The prize was instituted in 1936. On his retirement Emeritus Professor A. F. Barker made over to the University the sum of £250, being the amount of the testimonial fund subscribed by members of the University and others in

recognition of his period of tenure of the chair of textile industries. In accordance with the wishes of the donor, the interest on the fund is devoted to the provision of two prizes which are awarded annually.

2. The prizes will ordinarily be awarded in each year, one to the student presenting the best thesis for a diploma in the department of textile industries and the other to the student placed first in the final examination for the degree of Bachelor of Science in textile industries.

3. Either or both of the prizes may be withheld if there are no candidates of sufficient merit in any year.

4. The prizes shall be of equal value and the whole of the annual income of the fund shall be used for the purpose, provided that the value of each prize shall not exceed £5.

5. Any income not expended in any year shall be added to the capital of the fund.

6. The fund may be added to from time to time from donations received by the University for the department of textile industries. It is hoped by the donor that in this way it may be possible at a later date to convert the prize into a travelling studentship.

### *The British Ropes Ltd. Prize in mining*

1. Messrs. British Ropes Ltd. present the sum of £20 annually to the department of mining for the award of a prize each year.

2. The prize will ordinarily be awarded on the recommendation of the head of the department of mining to the most successful candidate in the final examination for the degree of Bachelor of Science in mining (ordinary or Honours) but may, in special circumstances, be divided between two candidates.

3. The prize will take the form, wholly or in part, of books and/or instruments.

### *The Comber Prize in agricultural chemistry*

1. The prize was founded in 1954 by Mrs. N. Comber from a sum of money presented to her late husband Emeritus Professor N. M. Comber, on his retirement.

2. The prize, of the value of approximately £7, will be awarded annually by the Senate on the recommendation of the head of the department of agriculture to the best student in the subject of agricultural chemistry (courses G1 and G2).

3. If in any year no candidate is deemed to be of sufficient merit the prize will not be awarded, but the interest for that year will be added to the capital of the fund.

4. In awarding the prize consideration will be given to the whole of the systematic and practical work of the candidates in courses G1 and G2 in agricultural chemistry.

5. In the event of there being two candidates of equal merit, the prize shall be divided.

### *The Dorman Long Prize in civil engineering*

1. The Dorman Long prize was instituted in 1961 by Messrs. Dorman Long (Bridge and Engineering) Ltd., Middlesbrough.

2. The prize will be awarded to the student of civil engineering who, at the end of the final year course, is judged to show most promise in the design of steel structures.

3. The award will be made by the Senate annually on the recommendation of the head of the department of civil engineering, provided that there is a candidate of sufficient distinction. If in any year no award is made the prize money will be allowed to accumulate and used to make additional awards in subsequent years.

4. The award will consist of books or instruments to the value of £10.

### *The Heseldin Prize in civil engineering*

1. The Heseldin prize was instituted in 1945 by George Heseldin, Master of Science of the University.

2. The prize will be awarded to the student of civil engineering who, at the end of the final year course, is adjudged by the professor of civil engineering to show most promise.

3. The award will be made by the Senate annually, provided that a candidate of sufficient distinction is eligible. If in any year no award is made the prize money will be allowed to accumulate and used to make additional awards in subsequent years.

4. The award will consist of books or instruments to the value of £25.

### *The Holst Prize in civil engineering*

1. The Holst prize was instituted in 1960 by Messrs. Holst and Company Ltd., Leeds and Watford.

2. The prize will be awarded to the student of civil engineering who, at the end of the final year course, is judged to show most promise in the design and "detailing" of civil engineering structures.

3. The award will be made by the Senate annually on the recommendation of the head of the department of civil engineering, provided that a candidate of sufficient distinction is eligible. If in any year no award is made the prize money will be allowed to accumulate and used to make additional awards in subsequent years.

4. The award will consist of books or instruments to the value of £10.

### *The Imperial Chemical Industries Ltd. Prizes in mining*

1. Two prizes are awarded annually by Imperial Chemical Industries Ltd. to students of the department of mining.

2. The sum of £15 shall be allotted annually at the discretion of the head of the department of mining.

3. The sum shall be allotted as follows:
£10 to the student who does best in the final examination in mining.
£5 to the student who does best in surveying, including field work, drawing office and theory.

4. No student shall be awarded both prizes at any time.

5. No student shall be eligible unless he has had at least six months' practical experience in a mine.

### *The Lawrence Ingle Prize*

1. The Lawrence Ingle prize was endowed in 1951 by Mr. Lawrence Ingle of Messrs. W. L. Ingle & Sons, Ltd., of Churwell, and consists of books to the value of £6.

2. The prize will be awarded annually for the most meritorious research carried out by a student for the degree with Honours in leather science and will be based on the written account of the problem submitted to the examiners.

3. All students in the Procter department of food and leather science who are in the final year of schemes of study leading to the degree of Bachelor of Science with Honours in leather science are eligible to compete.

4. The award will be made by the Senate on the recommendation of the head of the Procter department of food and leather science.

5. If in any year no award is made the income for that year will become available for award in a subsequent year, in the event of two accounts of equal merit being submitted.

### *The New Foundation Prize in mechanical engineering*

1. The New Foundation Prize in mechanical engineering was subscribed in 1963 by former students of mechanical engineering to commemorate the opening of the new building.

2. The prize, which is of the approximate value of £25, will normally be awarded annually to the final year student of mechanical engineering who is judged to have shown the greatest merit during his course at the University.

3. The prize shall be awarded by the Senate on the recommendation of the head of the department of mechanical engineering.

4. Should no award be made in any year, the interest will be added to the capital.

### *The Seton Prize Fund*

1. The local Royal Show committee under the chairmanship of Sir Harold Mackintosh, which was appointed to raise and administer the local fund in connection with the annual show of the Royal Agricultural Society held at Harrogate in 1929, on winding up the fund, decided to present to the University of Leeds in recognition of the work of the department of agriculture, a sum of £338 19s. 10d., being one quarter of their surplus. This sum has been supplemented by various donors including Emeritus Professor and Mrs. Seton who made a joint gift of £100 to the University which was added by the Council to the prize fund. The prizes will be awarded under the following conditions:

2. Two prizes of equal value will ordinarily be awarded in each year, one to a student completing the three-year course for the Bachelor of Science degree in agriculture and one to a student completing a four-year degree course with Honours in agriculture or in one of the agricultural sciences. The awards will be based on the results of final degree examinations, but departmental examinations and the class record of the student may also be taken into account.

3. In special circumstances the University may award more than two prizes. In the event of there being no candidate of sufficient merit in any year either prize will be withheld.

4. The whole of the annual income of the fund shall be utilised for the purpose, provided that the value of each prize shall not exceed £15.

5. Any income not expended in any year shall be added to the capital of the fund.

6. The fund may be added to from time to time from donations received by the University for the department of agriculture.

### *The Whetton Prize in mining*

1. The prize was founded in 1961 from a sum of money presented to Emeritus Professor J. T. Whetton by his colleagues and friends of the University on his retirement.

2. The prize will be awarded annually to a final year student who shows the greatest merit in his presentation of the whole of the practical work in mining and surveying submitted for the final examination. The award will be made by the Senate on the recommendation of the head of the department of mining, provided that there is a candidate of sufficient distinction.

3. The award will consist of books to an approximate value of £5 5s.

### *The Yorkshire Switchgear Prize and The George Caton Prize in electrical engineering*

1. The Yorkshire Switchgear and George Caton prizes were instituted in 1964 by the Yorkshire Switchgear and Engineering Company Limited, Leeds, and by Mr. George Caton, M.I.E.E., Chairman and Managing Director.

2. The Yorkshire Switchgear prize will consist of books or instruments to the value of £20, and will be awarded to the student who is judged to be the most outstanding graduate of the year in the Honours school of electrical engineering.

3. The George Caton prize will consist of books or instruments to the value of £10, and will be awarded to the student graduating with Honours in electrical engineering who is judged to have exhibited the most outstanding performance in the project or dissertation required as part of the final examination.

4. Should the same student be eligible for both prizes, he shall be awarded the Yorkshire Switchgear prize and the George Caton prize shall be awarded to the student who gave the next best performance in the project or dissertation.

5. The awards will be made by the Senate annually on the recommendation of the head of the department of electrical engineering, provided that candidates of sufficient distinction are available. If in any year no award is made the prize money will be allowed to accumulate and may be used to make additional awards in subsequent years.

6. In the event of there being no candidate of sufficient distinction for the award of the Yorkshire Switchgear prize but more than one who is judged worthy to receive the George Caton prize, the funds normally applied to the Yorkshire Switchgear prize may be used to enable one or more additional George Caton prizes to be awarded.

### *The Yorkshire Union of Institutes Prize Fund*

1. A prize of the approximate value of £4 will be awarded each year from a fund provided by the Yorkshire Union of Institutes. It will be associated in alternate years with the names of Jabez Woolley and James Hole.

2. The prize will be awarded by the Senate on the recommendation of the professors of engineering in June each year to the most meritorious student placed in the first class in the Honours schools of civil, mechanical, or electrical engineering.

### *The Birkett Prize*

1. The prize, of the value of about £3, is awarded annually after a report from the examiners on the results of the second examination for the degrees of Bachelor of Medicine and Bachelor of Surgery to the candidate who is placed *proxime accessit* to the candidate or candidates awarded the Infirmary prize, always provided that he obtains an Honours mark in at least one subject of the examination.

Regulations for the Fattorini prize and medal in clinical psychiatry are on page 750.

### *The Faculty of Ophthalmologists and Tomlin Undergraduate Prize*

1. Mrs. A. Tomlin in 1960 presented a sum of £100 to the University to endow a prize in ophthalmology in memory of Herbert Tomlin, M.D., a graduate of the University.

2. In 1963 the Faculty of Ophthalmologists offered to provide a prize of £10 10s. for competition by undergraduate medical students.

3. The Board of Medicine has therefore instituted a joint prize to be known as the Faculty of Ophthalmologists and Tomlin Undergraduate Prize.

4. The prize, of the value of approximately £14, will be awarded annually by the Senate, on the recommendation of the Board of the Faculty of Medicine, on the result of an examination which will usually be held in November. Candidates who satisfy the examiners in the written paper will be required to take a clinical and oral examination in addition, provided that no award may be made in any year unless a sufficiently high standard is attained.

5. Candidates must be students of the School of Medicine of the University of Leeds in their final year. Entries for the examination must be submitted to the sub-dean of the Faculty of Medicine by 15 October.

### *The James and Mabel Gaunt Prize*

1. Dr. Maria Lambert Beldon, a graduate of the University who died in 1954, bequeathed the sum of £500 to the University to endow a prize in paediatrics, to be known as the James and Mabel Gaunt prize, the prize to be awarded to the best student of the year in paediatrics.

2. The prize, of the value of approximately £15, will be awarded annually by the Senate on the result of a clinical and oral examination in paediatrics which will normally be held in November, provided that no award may be made in any year unless a sufficiently high standard is attained.

3. Candidates must be students in the School of Medicine who will be eligible to present themselves for their final (qualifying) examination in the calendar year in which they enter for the prize.

4. The examiners shall be the professor of paediatrics and child health, the professor of public health and one other person appointed annually by the Board of the Faculty of Medicine.

5. Entries for the examination must be submitted to the sub-dean of the Faculty of Medicine by 15 October.

### *The Hardwick Prize in clinical medicine*

1. The prize was founded in 1865 with subscriptions raised among friends of the late Dr. Robert George Hardwick, an active member of the Council of the Leeds School of Medicine from 1861 to 1864.

2. The prize, of the value of £10, is awarded annually on the results of an examination which is normally held in November. Candidates who satisfy the examiners in the written paper will be required to take a clinical and oral examination in addition.

3. Candidates must have been students in the School of Medicine of the University of Leeds for not less than eight terms. They must be attending the medical practice of the United Leeds Hospitals and they must have held or be then holding the office of clinical clerk in that institution.

4. Entries for the examination must be submitted to the sub-dean of the Faculty of Medicine by 15 October.

### *The Hillman Prize in clinical medicine*

1. Under the will of the late Dr. G. B. Hillman the University received in 1932 a legacy of £1,000 for the establishment of a prize to be known as 'The Hillman Prize in Clinical Medicine.'

2. The prize, of the value of approximately £30, will be awarded annually in December for the best dissertation submitted on a medical subject chosen by the candidate.

3. Candidates must normally have taken the whole of the clinical course in Leeds and be in the final year or have obtained a medical qualification within the preceding twelve months.

4. The dissertation should be illustrated by case notes. The candidate need not confine himself to cases which were assigned to him during his period of clerkship or under his care as house physician but the notes must be written by the candidate himself and record his personal observations. The notes should include details of the patient's progress in hospital and after discharge from hospital. The dissertation, which should be in typescript, must not normally exceed a total of 5,000 words and should be submitted to the sub-dean of the Faculty of Medicine by 15 October.

### *The Infirmary Prize*

1. This prize was originally founded as a scholarship in 1888 by the Faculty of the General Infirmary at Leeds. It is of the value of £75.

2. The prize is awarded by the Senate after a report from the examiners on the result of the second examination for the degrees of Bachelor of Medicine and Bachelor of Surgery of the University.

### *The Jamieson Medal and Prize in practical anatomy*

1. In 1949, Mr. John G. Jamieson and Miss Barbara Jamieson presented to the University the sum of £100, to which was added the sum of approximately £750 subscribed by friends, to provide a medal in memory of Professor J. K. Jamieson, professor of anatomy in the University of Leeds from 1910 to 1936.

2. The medal will be awarded by the Senate annually in June on the recommendation of the professor of anatomy, to the student with the best record in practical anatomy during the period spent in preparation for the second examination for the degrees of Bachelor of Medicine and Bachelor of Surgery.

3. In addition the student to whom the medal is awarded will receive a prize of approximately £15.

### *The Littlewood Prize in anatomy*

1. The late Colonel H. Littlewood, formerly professor of surgery in the University, bequeathed a legacy of £1,000 to be applied for providing a prize in the department of anatomy every year or in alternate years.

2. This prize will be awarded on the result of the examination in anatomy for the second examination for the degrees of Bachelor of Medicine and Bachelor of Surgery in June each year, provided that the candidates have attended the full course of anatomy in the University, and that students for other qualifications who have attended the full course be permitted to compete for the prize.

### *The McGill Prize in clinical surgery*

1. A sum of approximately £315 collected as a memorial to Professor A. F. McGill was accepted by the Yorkshire College in 1892 and applied as part of the medical school building fund. At the same time it was decided to set aside a sum of £10 annually for the award of McGill prizes.

2. The prize is awarded annually by the Senate in December, after a report from the examiners of the final M.B., Ch.B. examination in surgery. Candidates who satisfy the examiners in the written paper will be required to take a clinical and oral examination in addition.

3. Candidates must be students in the school of medicine of the University of Leeds in their final year. Entries from those who are not candidates for the final M.B., Ch.B. examination must be submitted to the sub-dean of the Faculty of Medicine by 15 October.

### *The Scattergood Prize in obstetrics and gynæcology*

1. The prize was instituted in memory of Thomas Scattergood, M.R.C.S., the first Dean of the medical department in the Yorkshire College.

2. The value of the prize, which consists of books or instruments, is £5.

3. The prize is awarded annually on the results of an examination which is normally held in November. Candidates who satisfy the examiners in the written paper will be required to take a clinical and oral examination in addition.

4. Candidates must be students in the School of Medicine of the University of Leeds in their final year. Entries for the examination must be submitted to the sub-dean of the Faculty of Medicine by 15 October.

### *The Waddington Prize in anatomy*

1. The prize was instituted in 1944 by the relatives of George and Guy Waddington who had bequeathed their bodies for dissection in the department of anatomy. It will be awarded annually and will take the form of books awarded to that student of the junior anatomy class who in the opinion of the professor of anatomy, has shown most promise in his studies.

*The Edward Ward Memorial Prize in surgical anatomy*

1. The Edward Ward memorial prize in surgical anatomy of the value of approximately £3 10s. is awarded annually on a competition held under the following conditions:

2. The examiners for the prize will be the heads of the departments of anatomy and surgery and one other member of the University staff to be appointed by the Board of the Faculty of Medicine.

3. The examinations will be held in November in the week preceding the final examination for the degrees of Bachelor of Medicine and Bachelor of Surgery and will consist of a written paper, a *viva voce* examination on the living subject, and dissections.

4. Students are eligible irrespective of the qualifications for which they are working, and must be in their final year, but due allowance will be made for those whose course has been extended by extra courses for the degree of Bachelor of Science, or for some other reason satisfactory to the Board of the Faculty.

*The West Riding Panel Practitioners' Prize*

1. The prize, of the value of £25, is awarded annually on the result, in medicine only, of the final examinations for the degrees of Bachelor of Medicine and Bachelor of Surgery in December and June of the same year, provided that students who are working for other qualifications and are otherwise eligible be allowed to compete, and provided that the candidate obtaining the highest number of marks is deemed by the examiners to have attained a standard worthy of the award. Candidates must have received their clinical training wholly in the Leeds General Infirmary and will not be eligible to compete after three years from the date of passing the second examination for the degrees of Bachelor of Medicine and Bachelor of Surgery or its equivalent, excluding time occupied in working for a final examination for the degree of Bachelor of Science.

*The Stephen D. Hey Prize*

1. Mr. Stephen D. Hey, L.D.S.R.C.S. Eng., (one time member of the Dental School and Hospital at Leeds) provided in his will the sum of £500 to be invested by the University so that a dental prize should be awarded annually to the best dental operator in conservative dentistry in the final year in the University of Leeds Dental School. The present value of the prize is £20.

2. The award will be made by the Senate on the recommendation of the Board of the Faculty of Medicine and the Clinical Dental Committee.

3. The prize will be awarded to the student who has carried out the most satisfactory work in conservative dentistry during the final year of the course. The student's work in the clinical part of the final examination may be taken into consideration.

### *The Percy Leigh Prize in clinical dental surgery*

1. Mr. P. T. Leigh, L.D.S. (Leeds and Glasgow), R.C.S. (England), to mark his year of office (1935-6) as Lord Mayor of Leeds, presented to the University the sum of £100 to provide annually a prize of the value of three guineas in the subject of clinical dental surgery.

2. The award will be made by the Senate on the recommendation of the Board of the Faculty of Medicine and the clinical dental committee.

3. The prize will be awarded on the result of an examination in clinical diagnosis, including clinical pathology and bacteriology and the interpretation of radiographs. A high standard of proficiency must be attained by the successful candidate.

4. Candidates must be students of the University of Leeds who are in the final year of a normal curriculum for the degree of Bachelor of Dental Surgery or for the diploma in dental surgery, and no candidate may compete more than once for the prize.

# REGULATIONS FOR MEDALS

## *The Leblanc Medal*

1. The Leblanc Memorial committee presented the Victoria University with a portion of the surplus from the fund raised in France for the erection of a statue of the distinguished chemist Nicholas Leblanc, the amount to be devoted to the encouragement of the study of chemistry. On the foundation of a separate university in Leeds a share of the fund was vested in the University of Leeds.

2. Leblanc medals may be awarded at the final examination for the degree of Bachelor of Science in the Honours schools of colour chemistry, leather industries, and fuel and metallurgy to such students as are reported by the examiners to have shown special distinction and who are recommended jointly by the internal examiners in these subjects.

## *The Worshipful Company of Skinners' Silver Medal*

1. The Worshipful Company of Skinners of the City of London, whose generosity made possible the erection in 1899 of the building for the department of leather industries, decided in 1952 to provide annually a silver medal to be awarded to a student of the department.

2. The medal will be awarded by the Skinners' Company on the recommendation of the Senate to the student who, in the opinion of the Procter professor of food and leather science, has most successfully completed his studies in the department.

3. A student to whom the medal has been awarded will not be eligible for the award in a subsequent year.

## *The Yorkshire Agricultural Society Medal*

1. In 1948 the Yorkshire Agricultural Society offered to provide each year a silver gilt medal for award to the student who acquitted himself, particularly in the subject of agriculture, with greatest distinction throughout the degree course.

2. The award will be made by the Senate on the recommendation of the professors of the department. A high academic standard will be required, but all relevant personal qualities will be taken into consideration and the recommendation will not be based upon examination results alone.

## *Fattorini Medal and Prize in clinical psychiatry*

1. The Fattorini Medal and Prize were established in 1961, by Mr. J. Fattorini, *M.B.E., T.D.*, J.P., a member of the Leeds Regional Hospital Board.

2. The medal and a prize of £30 are awarded annually on the results of an examination which is normally held in November. Candidates who satisfy the examiners in the written paper will be required to take a clinical and oral examination in addition.

3. No award may be made in any year in which a sufficiently high standard is not attained.

4. Candidates must have taken the whole of the clinical course in Leeds. They must be in the final year or have obtained a medical qualification within the preceding twelve months.

5. Entries for the examination must be submitted to the sub-dean of the Faculty of Medicine by 15 October each year.

### *The William Hey Medal*

1. The late Lord Moynihan presented to the University the sum of £200 for investment to provide a medal for the most distinguished graduate with first class Honours in the list of Bachelors of Medicine and Bachelors of Surgery of the calendar year.

2. The award will be made by the examination committee in December on the results of the final examination for the degrees of Bachelor of Medicine and Bachelor of Surgery and on a consideration of the student's general standing, record and character. Results of previous examinations [the second, third and fourth examinations for the degrees] will also be taken into consideration and the successful student must have displayed qualities of such an order as to entitle him to special distinction.

3. If two candidates show special merit and the funds of the trust allow, the examiners may recommend a double award.

### *The Percy Leigh Medal*

1. Mr. P. T. Leigh, L.D.S. (Leeds and Glasgow), R.C.S. (England), in 1929 presented to the University to encourage the science and art of dental mechanics the sum of £105 to provide a medal to be awarded annually to a student in the dental mechanics laboratory of the dental school.

2. The award will be made by the Senate on the recommendation of the Board of the Faculty of Medicine and the clinical dental committee.

3. The medal will be awarded on the results of the prize examinations in dental mechanics. The results of the professional examination in dental mechanics and the properties of dental materials may be taken into consideration. A high standard of skill must be shown.

4. No student will be permitted to compete for the medal more than once.

5. If two candidates are equally deserving of the award, two medals may be awarded.

### *The Charles Rippon Medal*

1. Mr. Charles Rippon, Ph.D., L.D.S., on his retirement in 1928 from the lectureship in dental mechanics, presented to the University the sum of £100 to provide a silver medal to be awarded annually to the most distinguished student of the year in the School of Dentistry.

2. Candidates for the medal must be students who are in the final year of a full curriculum for the degree of Bachelor of Dental Surgery or for the diploma in dental surgery and who have pursued the full course of clinical studies at the University of Leeds after registration.

3. The award will be made by the Senate on the recommendation of the Board of the Faculty of Medicine and the clinical dental committee after the results of the two final examinations of the year have been ascertained. Only candidates who have attained a high standard of proficiency shall be eligible. In determining the award of the medal, account will be taken of the marks obtained in the prize examinations taken during the final year of the course, the marks obtained in the final professional examination and each candidate's general record.

4. No student will be allowed to compete for the medal more than once.

5. If two candidates show equal distinction two medals may be awarded should there be sufficient funds for the purpose.

*The Williamson Medal*

1. Mr. Norman Tetlow Williamson, L.D.S., *Leeds*, provided in his will the sum of £100 to be invested by the University in order to provide an award to be made annually after an examination relating to the treatment of children's teeth.

2. The award will be made by the Senate on the recommendation of the Board of the Faculty of Medicine and the Clinical Dental Committee.

3. The medal will be awarded on the result of a written examination in children's dentistry. Candidates' general record of clinical work in the children's department of the dental hospital may be taken into consideration.

4. No student will be permitted to compete for the medal more than once.

5. If two candidates show equal distinction, two medals may be awarded if there be sufficient funds for the purpose.

# REGULATIONS

## FOR FINANCIAL GRANTS AND LOANS

### *The Baillie Memorial Fund*

A fund of £784 raised to commemorate the services to the University of Sir James Baillie, *O.B.E.*, Vice-Chancellor from 1924 to 1938, has been set aside at his express wish for the assistance of necessitous students.

### *The William Briggs Fund*

1. In 1932 Dr. William Briggs endowed this fund with the sum of £2,100.

2. The purpose of the fund is to assist students whose means are otherwise insufficient to enter upon or to continue a course of study at the University.

3. Grants will be made by the Senate on the recommendation of the grants in aid committee.

### *The Harvey Travel Bursaries*

1. In 1956 the late Dr. T. E. Harvey, a former student of the Yorkshire College, honorary graduate of the University, member of the Court for forty years and a representative of the combined universities in Parliament for eight years, bequeathed to the University the sum of £1,000 "to provide holiday bursaries for students especially with a view to travel abroad not to be awarded by competition."

2. All full-time students, graduate or undergraduate, in any Faculty of the University are eligible for the award of a bursary; no student who has already held an award from the fund will be eligible for a further award.

3. The bursaries will be awarded by the Senate on the recommendation of the scholarships committee and will be tenable during the long vacation. Candidates may be required to submit themselves for interview.

4. Applications giving particulars of the proposed programme of travel should be received not later than 30 April; candidates wishing to apply for both the Mouat Jones and Harvey Travel Bursaries may do so in one letter of application.

### *The Leeds City Council Fund*

1. The fund was founded by the Council of the University in 1892 out of the sum voted by the Council of the City of Leeds, and up to 1912 provided for the award of an entrance scholarship. In 1912 the Council, on the recommendation of the Senate and with the approval of the city education committee, decided to utilise the money in extending the courses of deserving and necessitous Leeds students in attendance at the University.

2. In recommending candidates for appointment, the Senate will be guided by the position held by the candidates in their terminal examinations, and also by their general work and conduct. The need of the applicants for financial assistance will also be taken into consideration.

### *The Mouat Jones Travel Bursaries*

1. On the retirement of Dr. B. Mouat Jones from the Vice-Chancellorship of the University in 1948, it was decided to raise a fund to mark appreciation of his services during his ten years' tenure of office. Dr. Mouat Jones expressed the wish that any money thus raised should be devoted to assisting students to travel abroad during a vacation. Contributions were therefore invited for the purpose of establishing the Mouat Jones travel bursaries fund and a sum of approximately £3,200 was subscribed.

2. All full-time students, graduate or undergraduate, in any Faculty of the University are eligible for the award of a bursary but no student who has already held such an award will be eligible for a further award from the fund. Bursaries may not be held for the purpose of satisfying the regulations of any of the schools of linguistic studies concerning attendance at a foreign University.

3. The value of a bursary will not normally exceed £30, and the total awards in any one session will be limited generally to £90.

4. The bursaries will be awarded by the Senate on the recommendation of the scholarships committee. Candidates may be required to submit themselves for interview.

5. Applications giving particulars of the proposed programme of travel, should be received not later than 31 January from those wishing to hold the award in the Easter vacation and not later than 30 April for those wishing to hold the award in the long vacation.

### *The Sadler Memorial Fund*

The committee formed to obtain for the University by subscription a portrait of Sir Michael Sadler, *K.C.S.I.*, Vice-Chancellor from 1911 to 1923 presented to the University the surplus fund amounting to £730 for investment to form the nucleus of a fund for assisting necessitous students.

### *The Leighton Exhibitions*

1. The exhibitions were instituted in 1894 by the trustees of the late Mrs. Isabel Leighton of Leeds.

2. Candidates must be registered students of the University of not less than two terms' standing. They must have attended a primary school or schools in the city of Leeds for not less than three years.

3. Three exhibitions are ordinarily offered each year, each of the annual value of £10, and are tenable for two years and renewable for two years subject to the reports on the student's work during the first year of tenure being satisfactory.

4. The exhibitions will not be awarded on any special examination, but those students who wish to become candidates are required to send in their names to the Registrar not later than 1 May each year.

5. In recommending candidates for appointment, the Senate will be guided by the position held by the candidates in their terminal examinations, and also by their general work and conduct. The need of the applicants for financial assistance will also be taken into consideration.

6. The exhibitions are tenable by students pursuing any course of study in the Faculties of Arts, Science and Technology, and may, with the consent of the trustees be held in conjunction with any other scholarship.

7. The election will be made in the third term of the session, provided that there be suitable applicants.

### *The Lord Snowden Endowment Fund*

1. The fund, established with monies subscribed to commemorate the late Right Honourable Philip, Viscount Snowden of Ickornshaw, was given to the University for the teaching or for the encouragement, assistance or advancement of music in the University.

2. The annual income from the fund, approximately £120 a year, has been allocated for the award of travel bursaries and of an annual prize.

3. (a) The Lord Snowden prize of the value of £15, will be awarded annually by the Senate to the student reading either for the degree of Bachelor of Arts in special studies in music or for the degree of Bachelor of Music, who, in the opinion of the professor of music, has produced the most notable achievement in study, composition or other appropriate activity during the session.

(b) A student to whom the prize has been awarded will not be eligible for the award in a subsequent year.

(c) No award will be made unless the Senate, as advised by the Professor of music, is satisfied that the candidate's achievement is sufficiently meritorious.

4. (a) The Lord Snowden travel bursaries will be awarded annually and will be of a value not exceeding £50.

(b) The awards will be open to candidates for the degree of Bachelor of Arts in special studies in music or to those who are taking music for three years in the course leading to the degree of Bachelor of Arts in combined studies. Normally, preference will be given to students who are in the first or second year of their course.

(c) Candidates must submit with their applications plans of their proposed travel, indicating how these will serve to further their musical education.

(d) Applications should reach the Registrar not later than 31 March each year.

### *The Walter Garstang Fund*

1. The late Emeritus Professor W. Garstang bequeathed to the University the sum of £600 for the endowment of awards to enable meritorious students of the department of zoology to take approved vacation courses of study or research in marine or freshwater biology; and in particular to enable undergraduate students to attend vacation courses at the Plymouth laboratory of the Marine Biological Association or at the Windermere station of the Freshwater Biological Association.

2. Grants may be made from the residue of the income in any year towards personal travelling expenses of postgraduate or Honours students pursuing approved hydro-biological investigations away from Leeds.

3. The awards will be made annually by the Senate on the recommendation of the head of the department of zoology. The value of an award will not be fixed but will be assessed separately in each case.

4. The annual income from the fund is approximately £18; income not spent in any year may be used for making additional awards in a subsequent year.

*The J. H. Priestley Memorial Fund*

1. The J. H. Priestley memorial fund was established by former students of the department of botany and by his friends and colleagues as a tribute to the work of Joseph Hubert Priestley, professor of botany in the University from 1911 to 1944, and as a mark of the esteem in which he was held. The fund, amounting to approximately £800, was given to the Council to hold in trust, the income to be used for awards to enable students of the department to further their botanical studies.

2. The awards will be made by the Senate on the recommendation of the head of the department of botany, for specific purposes such as field studies, visits to other institutions or purchase of special books or apparatus. Awards can be made from the current or accumulated income of the fund at any time during the session. The value of an award will not be fixed but will be assessed separately in each case.

3. The recipients of awards must sign their names in the book kept in the Brotherton library for this purpose and must state the use to which the award is to be put.

4. The annual income available is approximately £24. Income not spent in any year may be used for making additional awards in a subsequent year.

5. Applications for awards must be sent to the Registrar together with a statement of the purpose for which the award will be used.

*Baines Conference Bursaries*

1. These bursaries were instituted in 1962 by Arthur Richard Baines, *C.B.E.*, LL.D., F.T.I., a representative of the Clothworkers' Company on the University Court, who endowed a fund of £600.

2. The income of the fund is to be used to assist undergraduate and research students of the departments of textile industries and of colour chemistry and dyeing, to attend annual conferences of the Textile Institute and the Society of Dyers and Colourists, the symposia of the Faraday Society and any other meetings approved by the heads of the departments of textile industries or of colour chemistry and dyeing. Preference will be given to students studying wool textiles.

In accordance with the wishes of the donor, only students normally domiciled in the United Kingdom are eligible.

3. The bursaries will be awarded by the Senate on the recommendation of the head of the department of textile industries, or the head of the department of colour chemistry and dyeing.

4. A student who has already held one of these bursaries will not normally be eligible for a further award from the fund.

### *The Cobb Memorial Fund*

1. On his retirement a fund was raised to commemorate the services to the University and to industry of Professor J. W. Cobb, *C.B.E.*, Livesey professor of coal gas and fuel industries from 1912 to 1938. Contributions were received from friends within and without the University and from the industries, notably the gas industry, with which Professor Cobb's work had been connected. In accordance with his wish, the balance of the fund, amounting to £769, was presented to the University in order that the income from it should be used to assist students in the Houldsworth School of Applied Science to meet the cost of maintenance while at the University, or to cover other expenditure necessary for their studies or researches.

2. Grants from the fund are made by the Senate on the recommendation of the head of the department concerned.

### *The John Goodman Testimonial Fund*

1. The income from the invested capital contributed by old students and friends of Emeritus Professor J. Goodman will be expended in making grants of drawing instruments or text books on engineering. The value of each grant will be approximately £5.

2. No student is eligible to receive a grant unless he has, prior to entering the University, worked for at least twelve months in an engineering workshop [not an office] carried on purely for industrial purposes.

3. The grants will be made to students requiring financial assistance and who are pursuing a three years course of instruction in civil, electrical or mechanical engineering. Applications for grants must be made in writing to the professor of engineering during June in the student's first year. Successful candidates will receive their instruments or text books at the beginning of their first long vacation.

4. The professor of engineering will select the candidates and will recommend the Senate to make the awards accordingly. The names of the students receiving grants will not be made public, and no mark shall be put on the instruments or books which will allow of their being identified as coming from the fund.

### *The Haydon Memorial Fund*

1. The Haydon Memorial Fund was created from a bequest of £1,000 in the will of the late Mr. R. W. Haydon, lecturer in agriculture from 1891 to 1921, to be used in the interest of the department of agriculture of the University as the governing body of the University may decide.

2. The income of the fund shall be used to enable graduate or undergraduate students in the department of agriculture to participate during vacations in research programmes or other activities approved by the head of the department.

3. The income of the fund is about £40 per annum but the value of the award will be assessed separately in the case of each candidate.

4. The award will normally be made each year.

5. The award will be made by the Senate on the recommendation of the head of the department of agriculture, who, in making the award, will take into account, in addition to academic distinction, the nature of the work proposed and the personal contribution of the candidate to the activities of the department and of the University.

6. The income not used in one year shall be available in a subsequent year.

*The H. J. Hodsman Memorial Travel Bursary*

1. On the death of Mr. H. J. Hodsman, *M.B.E.*, senior lecturer in gas chemistry, in 1951, a fund was raised to commemorate the services that he had rendered since 1908 to the University, to the profession of applied chemistry and to industry. Contributions were received from his many friends within and without the University and from the industries with which his work had been connected. The balance of the fund, amounting to approximately £900 was presented to the University to endow a travel bursary to assist students of his former department to obtain approved technological experience overseas during the long vacation.

2. All full-time students of the Houldsworth School of Applied Science are eligible for the award of the bursary, but no student may receive an award more than once. The bursary, amounting to approximately £40, will normally be awarded each year.

3. The bursary will be awarded by the Senate on the recommendation of the head of the department. Candidates may be required to submit themselves for interview.

4. At the end of their vacation work, holders of the bursary will be required to submit a report upon their experience to the Senate.

5. Applications, giving particulars of the proposed programme of travel and vacation experience, should be made to the Registrar not later than 31 March.

*Speakman Bursaries*

1. Emeritus Professor J. B. Speakman, *C.B.E.*, D.Sc., F.R.I.C., F.T.I. (Hon)., on his retirement in 1963 presented to the University the sum of £2,000, being the balance of a testimonial fund subscribed by colleagues and friends to commemorate his thirty-nine years' service to the University and to the textile industry, and his twenty-four years as head of the department of textile industries.

2. The income of the fund will normally be used to assist research students and junior members of the staff of the department of textile industries to attend conferences and seminars, particularly the Quinquennial International Wool Textile Research Conferences.

3. The bursaries will be awarded by the Senate on the recommendation of the head of the department of textile industries.

4. A student or member of staff who has already held one of these bursaries will not be eligible for a further award from the fund.

### *Maintenance grants from senior scholarship funds*

The Senate may at its discretion use senior scholarship funds to make grants to students in need of financial assistance, including those who have not completed one year's attendance in the University. Student wishing to be considered for such grants should make application on the appropriate form, which can be obtained from the Registrar.

### *The Students' Aid Fund*

1. The students' aid fund was established by the Council to meet the case of students who through some unforeseen circumstances arising during their course would be unable without some financial assistance to complete their course in the University. Advances may be made from this fund in the form of a loan on a signed undertaking by the student to refund the amount advanced as soon as possible. The loans are made free of interest for a period of two years after the completion of the student's course in the University and are thereafter subject to interest at the rate of five per cent per annum.

2. No precise limit has been placed on the amount of loan which may be made in any particular case from this fund but in no case will it exceed the minimum amount which is indispensable to enable the student to complete his course. It will therefore be necessary that the applicant should give full information as to his source of income together with an estimate of his expenses. All such information will be treated as strictly confidential by the small committee which is charged with the administration of the fund.

3. Applications should be addressed to the Registrar, from whom forms for the purpose may be obtained.

Regulations governing grants from the research fund of the University of Leeds Institute of Education will be found on page 760.

# AWARDS

## OF THE UNIVERSITY OF LEEDS INSTITUTE OF EDUCATION

### *The Institute of Education Research Fellowships*

1. Two research fellowships are provided in the University Institute of Education.

2. The senior research fellowship has an annual value of between £1,500 and £1,750, and is tenable for a period of two years. Under certain circumstances it is possible for the appointment to be extended for a further year. The University is prepared, if necessary, to negotiate with an employer for the secondment of a successful candidate during the tenure of the fellowship.

3. Unless an alternative arrangement is made for a candidate who is seconded, the senior research fellow will be required to join the Federated System of Superannuation for Universities under which the member contributes five per cent of his salary and the University contributes a sum equal to ten per cent of his salary.

4. The second research fellowship has an annual value of between £600 and £800 and is tenable for one year by a research worker visiting the United Kingdom and already assured of an income for the period of his visit.

5. Candidates for both fellowships should be prepared to make a special study in an approved field of educational interest.

6. The fellowships are open equally to men and women.

7. Applications, including the names and three referees, together with an outline of the programme of research proposed by the candidate, should be sent to the Registrar of the University.

### *The Institute of Education Research Grant Fund*

1. A research grant fund was established in 1951 to enable assistance to be given to educationists within the area of the University Institute of Education for educational research and investigation, or visits to educational institutions in this country or abroad.

2. Grants will not normally exceed £25 for any one project, but may be increased both for long term undertakings and to finance the publication of researches already undertaken. It is also possible for block payments to be made to teams working on a piece of co-operative research.

3. Successful applicants will be required to present a report on the results of the researches for which grants were awarded.

4. Applications for grants, giving details of the plan of the proposed research, may be sent to the secretary of the Institute at any time.

# AWARDS BY OTHER BODIES

Scholarships and other awards tenable at the University are also offered by many local authorities including the council of the City of Leeds and the county councils of the North, East and West Ridings of Yorkshire. Information may be obtained from the chief education officer of the authority concerned and from:

Leeds City Council: the Chief Education Officer (higher section), Education Offices, Calverley Street, Leeds, 1.

West Riding County Council: the Chief Education Officer, Education Department, County Hall, Wakefield.

North Riding County Council: the Secretary, Education Office, County Hall, Northallerton.

East Riding County Council: the Chief Education Officer, East Riding County Council, Beverley.

### *The William Walker Exhibitions*

These exhibitions are intended to enable students to obtain at Leeds University scientific instruction of an advanced character in the technology of coal and its by-products and in the technology of leather. Each exhibition is of the annual value of from £70 to £90 and, subject to the condition named below, is tenable for three years, with power of extension by the trustees for a fourth year in the case of an exhibitioner who has shown exceptional promise during his course of training at the University. The continuation of the exhibition each year after the first will depend on the work done by the exhibitioner in the previous year being reported to the trustees as satisfactory. The trustees may, if they think proper, divide the income of each exhibition between two candidates, or only award part of it in certain cases, as determined by circumstances.

Candidates for election to the exhibitions must be natives of, or living in the Poor Law Unions of Whitehaven and Bootle, except the Urban District of Millom, and between the ages of sixteen and twenty-two.

# HONORARY GRADUATES

JULY 1960—JUNE 1964

## DOCTORS OF LAWS

1960 *Barker Thomas Clegg*

1961 Arthur Richard Baines
William Ernest Jones
The Rt. Hon. Robert Gordon Menzies
Sir Jeremy Raisman
Sir James Robertson

1962 *Professor William Beare*
Sir Christopher William Machell Cox
*The Rt. Hon. Charles William Slingsby Duncombe, Earl of Feversham*
The Rt. Hon. Sir Harry Braustyn Hylton-Foster

1963 Charles Henry Crabtree
Dr. Kenneth Onwuka Dike
Col. Geoffrey Herbert Kitson
Alderman Leslie Maurice Lever
Lady (Mary Helen) Ogilvie

1964 The Rt. Hon. The Lord Denning
Dr. Margaretha Albertina Maria Klompe
The Rt. Hon. Lord Marks of Broughton
Sir Charles Richard Morris
Mr. Leslie Gordon Wilson

## DOCTORS OF LETTERS

1961 Barbara Hepworth
The Rev. Norman Henry Snaith

1962 Professor Edmund Charles Blunden
*The Very Reverend Eric Milner-White*
Mrs. Alva Myrdal
Professor Willem Jacob Verdenius

1963 Professor Alfred Gustave Herbert Bachrach

1964 The Rt. Rev. The Lord Bishop of Ripon
Mr. Arthur Waley *in absentia*

## DOCTORS OF SCIENCE

1961 Adolph Butenandt
Professor Richard Lester Cahn
*Sir Ronald Fisher*
*Sir John Hammond*
Charles Horner Greer Macafee
Professor Jens Waerhaug

1962 Professor Patrick Maynard Stuart Blackett
Dr. Louis Harold Gray, F.R.S.
Dr. Alexander Hollaender
Professor Alexander Mikhajlovich Kuzin
Dr. Raymond Latarjet
Professor Konrad Zacharias Lorenz

1964 Sir Hans Adolph Krebs
Sir Harry Melville

## MASTER OF SCIENCE

1963 Ralph Chislett

## MASTERS OF ARTS

1961 Martha Steinitz
1962 Eirikur Benedikz
1963 Frank Dawtry
Frederick George Baxendale Hutchings
1964 Miss Elsa M. Carroll
Mr. Harry Dawson
Mr. William Thompson Oliver

## MASTER OF DENTAL SURGERY

1961 James Percy Cocker

# GRADUATES

## JULY 1960 — JUNE 1964

Abbey, David Thomas, B.Sc., with Honours in geology, class II(ii), 1962
Abbott, Antony Michael, B.Sc., with Honours in mechanical engineering, class II(ii), 1961
Abdollahinejad, Gholam Reza, B.Sc., 1964
Abell, John David, B.A., with Honours in economics, class II(ii), 1963
Peter Malcolm, B.Sc., with Honours in chemistry, class III, 1960; Ph.D., 1963
Aber, Clive Peter, B.Sc., with Honours in physiology, class III, 1949; M.B., Ch.B., with Honours, class II, 1952; M.D., 1962
Geoffrey Michael, M.B., Ch.B., 1952; M.D., with distinction, 1963
Ablett, Robin Martin, B.Sc., with Honours in physics, class III, 1963
Abraham, Sofaer Abraham, M.B., Ch.B., 1960
Abrahams, Ronald, B.Ch.D., 1964
Abrams, Christopher John, LL.B., with Honours, class II(i), 1961
Absalom, David, B.Com., with Honours, class II(ii), 1962
Ackroyd, Keith, B.Sc., with Honours in electrical engineering, class II(ii), 1961
Adam, Suleiman Muhmud, B.A., with Honours in history, class III, 1963
Adams, Janet Anne, B.A., with Honours in English and fine art, class II(ii), 1964
Julie Mary, B.A., with Honours in textile design, class III, 1964
Terence Ernest, B.Sc., with Honours in physics, class II(i), 1962
Thelma Shirley, M.B., Ch.B., 1961
Adamson, David, B.A., with Honours in English, class III, 1964
Martyn Gray, B.Sc., with Honours in chemistry, class I, 1960; Ph.D. (*in absentia*), 1964
Neil Thaimes, LL.B., with Honours, class III, 1962
Olive, B.A., with Honours in sociology, class II(ii), 1962
Addelman, Ronald, B.A., with Honours in French, class II(i), 1961
Addenbrook, David Graham, B.Sc., with Honours in colour chemistry, class II(i), 1961
Addison, George David, B.Sc., with Honours in mining, class II(i), 1961
Addy, Douglas Peter, M.B., Ch.B., 1961
Adin, Anthony, B.Sc., with Honours in chemistry, class II(ii), 1964
Adjei, Camillus Sowah, B.Ch.D., 1963
Irene Lillian, B.A., with Honours in history, class II(i), 1960
Adler, Madeline Phoebe, B.A., with Honours in English, class II(ii), 1964
Adley, Ernest George, B.A., with Honours in general studies, class II(i), 1961
Agboola, David Toyebi, B.A., in combined studies (geography and history), 1963
Aggarwal, Mohinder Pal, B.Sc., with Honours in mechanical engineering, class III, 1964
Agnew, Andrew Rogers Young, B.Sc., 1961
Agu, Louis Anindielo, M.Sc., 1963
Ahmad, Mumtaz, M.Sc., 1963
Ahmed, Bottan Ishaq, B.A., with Honours in economics, class III, 1962
Ainley, Angela, B.Sc., in general studies, 1963
Anthony Edward, B.Sc., 1964
Ainsworth, Barry James, B.A., with Honours in economics, class III, 1962
Akleman, Erol, B.Sc., with Honours in metallurgy, class III, 1960; M.Sc. (*in absentia*), 1962
Akroyd, Robert Ian, LL.B., with Honours, class III, 1964
Akyeampong, Kwabena Osei, B.Sc., 1964
Al-Arayed, Jawad Salim, LL.B., with Honours, class III, 1963
Albion, Alan Henry, B.Sc., with Honours in physics, class II(ii), 1962
Albiston, John Roger, B.A., with Honours in geography and history, class III, 1963
Alcock, Raymond, B.A., with Honours in economics, class III, 1963
Roger Walter, B.Sc., with Honours in metallurgy, class II(i), 1964
Alcott, Michael John, B.A., with Honours in English, class II(ii), 1961
Alderman, Dorothy Mary, B.A., with Honours in history, class III, 1964
Stephen, B.A., with Honours in economics, class II(ii), 1963
Alderson, Gillian Margaret, B.A., with Honours in French, class II(ii), 1962

Aldred, Graham Joseph, B.Sc., with Honours in electrical engineering, class III, 1961
James, B.Sc., 1964
Lawson, B.A., with Honours in general studies, class II(ii), 1961
Alexander, Anthony, B.Sc., 1962
Glenys Joy, B.A., with Honours in music, class II(ii), 1964
John, B.Sc., 1961
John Randolph Baillie, B.Sc. (agricultural studies), 1962
Alexandrian, Masis Nicoghos, B.Com., with Honours, class III, 1962
Alink, Hermanus Rudolphus Maria, M.Sc., 1963
Allan, Keith, B.A., with Honours in English, class II(ii), 1964
Mrs. Grace Ann, B.A., with Honours in sociology, class III, 1963
Allanach, Christopher Francis, B.Sc., with Honours in mining, class II(i), 1962
Allard, David, B.Sc., in general studies, 1961
Allen, Christopher George, B.Sc., 1962
Daphne Joyce, B.A., with Honours in modern languages, class III, 1961
Jean Hope, B.A., with Honours in sociology, class III, 1962
John Clive, B.Sc., with Honours in chemistry, class II(ii), 1963
John Godfrey, B.Com., with Honours, class II(i), 1962
John Kenneth, B.Sc., with Honours in chemistry, class II(i), 1961
Michael John, B.Ch.D., 1961
Peter Norman, B.Sc. (agricultural studies), 1962
Robert Perrin, B.Sc., with Honours in chemical engineering, class III, 1961
Valerie, B.A., with Honours in Russian, class II(ii), 1964
Allerton, Joan, B.Sc., with Honours in the chemistry of leather manufacture, class II(i), 1961
Allford, Gordon Rhodes, M.Ed., 1964
Allington, Reginald Graham, B.A., with Honours in general studies, class III, 1961
Allison, Leila Adrienne Willoughby, B.A., with Honours in English, class II(ii), 1964
Al-Safi, Adnan Younis, B.Sc., with Honours in civil engineering, class II(i), 1962
Alsop, Robert John, B.Sc., with Honours in botany, class III, 1961
Amako, Charles Chukwujioke, B.Com., 1962
Amaria, Phiroz Maneckji, B.Sc., 1963
Ambrosen, Anthony Keith, B.A., with Honours in German, class II(ii), 1964
Amies, David John, B.Sc., with Honours in civil engineering, class II(ii), 1963
Amin, Hassan Mohamed, M.A., 1961
Amirkhosrovi, Janice Elizabeth, B.A., with Honours in Italian, class II(ii), 1964
Anah, Nathaniel Nwadike, LL.M. (*in absentia*), 1960
Ancrum, Suzanne Elizabeth, B.Sc., with Honours in bacteriology, class II(i), 1964
Anderson, David, B.Sc., with Honours in civil engineering, class II (ii), 1962
Elizabeth Petra, B.A., with Honours in English, class II(i), 1958; M.A., 1960
Peter Roger, B.Sc., with Honours in mechanical engineering, class III, 1962
Robert James, B.Sc., in special studies (mathematics), 1964
Andrew, Christopher Hugh, B.Sc., with Honours in general studies, class III, 1962
Andrews, Alan Richard, B.A., with Honours in English, class II(ii), 1959; M.A., 1962
Arthur Matthew Gerald, B.A., with Honours in Spanish, class II(ii), 1962
Colin Walter, B.A., with Honours in general studies, class II(ii), 1962
David Clement, B.Sc., with Honours in civil engineering, class I, 1963
James Frederick, B.Sc., with Honours in biochemistry, class II(ii), 1961
Ronald Keith, B.A., with Honours in Russian, class III, 1961
Angamuthu, Arumugam, M.Sc. (*in absentia*), 1961
Anning, Nicholas Jenner, B.A., with Honours in Russian, class II(i), 1964
Annison, Peter, B.Sc., with Honours in textile chemistry, class II(ii), 1962
Ansbro, Elizabeth Mary, B.A., with Honours in psychology and sociology, class III, 1963
Anson, Brian, B.Sc., with Honours in physics, class II(i), 1961
Anvar, Jamshid, B.A., with Honours in economics, class III, 1962
Appleton, Alan, B.Sc., with Honours in physics, class I, 1962
Applewhite, John, B.Sc., with Honours in electrical engineering, class III, 1962
Apps, Andrew John, B.Sc., with Honours in chemical engineering, class II(ii), 1963

Aras, Nurettin, B.Sc., with Honours in metallurgy, class III, 1963
Archbald, David Stuart, B.Sc., with Honours in mechanical engineering, class II(i), 1963
Archer, John James, B.Sc., in general studies, 1963
Susan Marie, B.A., with Honours in music, class III, 1964
Argyle, Barry, B.A., with Honours in English, class I, 1964
Arinc, Kutlay, B.Sc., with Honours in textile engineering, class II(ii), 1963
Arme, Christopher, B.Sc., with Honours in zoology, class II(i), 1961
Armitage, John Wallis, Ph.D. (*in absentia*), 1964
William Keith, B.Sc., with Honours in metallurgy, class II(ii), 1960; Ph.D., 1963
Armstrong, Henry, B.Sc., 1964
Arnold, Leslie Edgar, B.A., with Honours in English, class II(ii), 1964
Margaret Jean, B.Sc., with Honours in chemistry, class II(ii), 1963
Arnoll, Trevor Rawlinson, B.Sc., with Honours in gas engineering, class III, 1961
Arram, Doria Sandra, B.A., with Honours in sociology, class II(i), 1959; M.A., 1961
Arstall, Brian Roger Adair, B.A., with Honours in English, class II(ii), 1963
Arthur, Dennis Robert, B.Sc., in general studies, 1964
Ash, John Colin Keith, B.A., with Honours in economics, class II(ii), 1964
Michael George, B.Sc., with Honours in electrical engineering, class II(ii), 1963
Vivien, B.A., with Honours in French, class II(ii), 1964
Ashby, David George, B.A., with Honours in English, class II(i), 1961
John, B.Sc., with Honours in civil engineering, class II(ii), 1964
Roger Edward, B.Sc., 1963
Ashcroft, Sheila Eveline, B.A., with Honours in general studies, class II(ii), 1962
Stanley John, B.Sc., with Honours in chemistry, class II(i), 1961
Ashelford, David John, M.B., Ch.B., 1961
Asher, Colin, B.A., with Honours in French, class II(i), 1961
Ashton, Anthony Richard, B.Sc., with Honours in general studies, class II(ii), 1961
Margaret, B.Sc., with Honours in mathematics, class II(ii), 1961
Michael James, B.Sc., with Honours in general studies, class II(ii), 1957; Ph.D., 1960
Winifred Diana, B.A., with Honours in general studies, 1947; B.Sc., with Honours in mathematics, class I, 1949; M.A., 1960
Ashurst, Brian Warwick, B.A., with Honours in English, class II(i), 1961
Ashworth, Hilary Elizabeth, B.A., with Honours in general studies, class II(ii), 1962
Aspland, John Richard, B.Sc., with Honours in colour chemistry, class II, 1958; M.Sc., 1960
Aspley, Keith Ramon, B.A., with Honours in French, class I, 1963
Asquith, Peter Leslie, B.Sc., with Honours in chemistry, class II(i), 1962
Astwood, David Arthur, B.Sc., with Honours in textile physics, class II(i), 1963
Atchison, Maureen, B.A., with Honours in English, class II(ii), 1964
Atherton, Elaine, B.A., with Honours in general studies, class III, 1961
Atkinson, Charles Henry, B.Sc., with Honours in civil engineering, class II(i), 1964
Colin, B.Sc., with Honours in mathematics, class I, 1962
David Stanley, B.Sc., with Honours in agricultural economics, class III, 1964
Geoffrey Frederick, B.Ch.D., 1960
James Roy, B.A., with Honours in general studies, class II(i), 1962
John, B.A., with Honours in Latin, class III, 1963
Michael, B.Sc., with Honours in general studies, class II(ii), 1963
Michael Richard, B.A., with Honours in sociology, class II(i), 1963
Neville Thomas, B.Mus., 1957; M.A., 1961
Paul Dearsley, B.Ch.D., 1960
Raymond Alexander, B.Sc., with Honours in general studies, class II(ii), 1964
Attoe, Graham Francis George, B.Sc., with Honours in chemical engineering, class II(i), 1962
Attridge, Charles James, B.Sc., in special studies (chemistry), 1962
Au, Helen Shuk Haan, B.A., in special studies (sociology), 1962
Austen, Edward Harold, B.Sc., with Honours in electrical engineering, class III, 1961
Austin, Keith Dudley, B.Sc., 1963
Auton, Ernest Henry, B.Sc., with Honours in agriculture, class II(ii), 1964

Auty, Geoffrey, B.Sc., with Honours in general studies, class III, 1963
John Rowland, B.Sc., with Honours in biochemistry, class III, 1962
Avakian, Haiganoosh, M.A., 1964
Avery, John Ernest, B.Sc., with Honours in gas engineering, class I, 1962
Aynsley-Smith, Catherine Frances, B.Sc., with Honours in general studies, class III, 1964
Ayres, Richard Frank, B.A., with Honours in geography, class II(i), 1964
Ronald Ivan, B.A., with Honours in economics, class II(ii), 1964

Baba, Mohamed Rashdan, Ph.D., 1964
Babb, Helen Elizabeth, B.Sc., with Honours in general studies, class II(i), 1962
Bacon, Andrew Richard, B.Sc., with Honours in civil engineering, class II(ii), 1964
Trevor Colin, B.Sc., with Honours in physics, class II(i), 1957; Ph.D., 1962
Badcock, William John, B.A., with Honours in modern languages. class II(ii), 1961
Baddeley, Gordon, B.A., with Honours in English, class II(ii), 1961
Badii, Mass'oud, B.Sc., 1964
Bagley, Mrs. (see also Jones, Cynthia Patricia), Ph.D., 1963
Bagnall, Paul Stanley, B.Sc., 1952; with Honours in geology, class II, 1953; M.Sc. (*in absentia*), 1964
Bagness, John Edward, M.Sc., 1962
Baguley, Edward Clarence, B.A., 1953; M.A., 1956; Ph.D., 1962
Bailey, Alan James, B.Sc., with Honours in electrical engineering, class II(ii), 1964
Ann, B.A., with Honours in general studies, class II(ii), 1962
Christopher James, B.Sc., with Honours in chemistry, class II(ii), 1962
Ernest, B.Sc., with Honours in biochemistry, class I, 1961
Norman Lewis, B.Sc., 1960
Peter John, B.Sc., with Honours in chemistry, class II(ii), 1962
Philip James, B.Sc., with Honours in biochemistry, class II(ii), 1959; Ph.D., 1962
Richard Alan, B.Sc., with Honours in civil engineering, class II(i), 1964
William Fawcett, LL.B., with Honours, class II(i), 1961
Baillie, Eleanor Gay, B.A., with Honours in Spanish, class III, 1964
Bain, Brian MacDonald, B.Sc., with Honours in chemistry, class II, 1958; Ph.D., 1964
Bainbridge, Mary, B.A., with Honours in history, class II(ii), 1962
Baines, George Harper, B.Sc., 1964
Bajpai, Lakshmi Shanker, Ph.D., 1960
Baker, Angela Mary, B.A., with Honours in sociology, class II(ii), 1964
Charles Hadman, B.A., with Honours in theology, class II(ii), 1962
David Sherman, LL.B., with Honours, class II(i), 1964
Frank Edwin, B.A., with Honours in economics, class II(ii), 1962
Michael Francis, B.Sc., 1962
Paul Anthony, B.A., with Honours in geography, class II(ii), 1964
Richard Denison, B.Sc., with Honours in agricultural studies, class II, 1957; M.Sc., 1960
Balfour, George Craigie, B.Sc., with Honours in chemical engineering, class III, 1963
Ball, David John, B.Sc., with Honours in civil engineering, class II(i), 1961
David Leslie, B.A., with Honours in English, class II(i), 1963
David Ralph, B.Sc., with Honours in gas engineering, class II(i), 1964
James Henry, B.A., with Honours in general studies, class II(ii), 1961
James Henry, B.Sc., with Honours in chemical engineering, class I, 1962
Ronald, B.Sc., with Honours in chemical engineering, class III, 1963
Ballantyne, Bryan, M.B., Ch.B., 1961
Balmforth, Dennis, B.Sc., with Honours in colour chemistry, class II, 1954; Ph.D., 1961
Joan Hilary, B.A., with Honours in geography, class II(ii), 1962
Bamber, Roy David, B.Sc., 1963
Bancroft, Duncan, B.Sc., with Honours in chemical engineering, class II(ii), 1962
Roger Neil, B.Sc., 1964

Banerji, Adyanath, B.Sc., 1961
Banham, Martin John, M.A. (*in absentia*), 1962
Banks, David Edward, B.Sc., with Honours in general studies, class III, 1963
David Leslie, B.A., with Honours in geography, class II(ii), 1964
Joseph Arthur Hedley Grenfell, B.A., with Honours in French, class II(ii), 1964
Bannister, Arthur, B.Sc., with Honours in civil engineering, class I, 1940; M.Sc., 1963
Geoffrey Malcolm, B.Sc., with Honours in agricultural botany, class II(i), 1961
Bantick, John Raymond, B.Sc., with Honours in chemistry, class II(i), 1962
Bapna, Hira Singh, B.Sc., 1961
Baptiste, Cislyn Arlene, B.A., with Honours in Spanish, class III, 1964
Baram, John Malcolm, B.Sc., with Honours in chemical engineering, class I, 1964
Barber, Harold Edward, B.Sc., with Honours in pharmacy, class II(ii), 1961; with Honours in pharmacology, class II(ii), 1962
Norman Frederick, B.Sc., with Honours in physics, class I, 1931; M.Sc., 1933; D.Sc. (*in absentia*), 1962
Tennant George Wing, B.Sc., 1961
William Edward, B.A., with Honours in history, class II(ii), 1964
Barclay, Helen Veronica, B.A., with Honours in general studies, class II(ii), 1962
Barge, Ian, B.A., with Honours in English, class II(i), 1961
Barker, Alan Leslie, B.Sc., 1964
Alwyn, B.Sc., with Honours in chemistry, class II(ii), 1961
David, B.Sc., with Honours in chemical engineering, class II(ii), 1962
Eileen Maria Theresa, B.Sc., with Honours in textile chemistry, class II(ii), 1962
Joan Margery, B.A., with Honours in music, class II(i), 1962
Roy, B.A., with Honours in Spanish, class II(ii), 1964
Barkhouse, David Cowan Petrie, M.B., Ch.B., 1962
Barley, David Ronald, B.Sc., with Honours in mechanical engineering, class III, 1961
Barnard, William Arthur, B.Sc., 1964
Barnes, Graham, B.Sc., 1964
John Edward, B.Sc., with Honours in civil engineering, class II(ii), 1963
John Keith, B.A., with Honours in textile management, class III, 1962
Leslie, B.A., with Honours in English, class II(ii), 1963
Barnett, Alan Keith, B.A., with Honours in German, class II(ii), 1961
Dorothy Frances, B.A., with Honours in English and fine art, class III, 1964
William Mark, B.A., with Honours in economics, class II(ii), 1963
Barnhurst, Margaret Ruth, B.A., with Honours in French, class II(ii), 1961
Barns, Rosalie, B.A., with Honours in philosophy and history, class III, 1963
Baron, Derek Norman, B.Sc., with Honours in chemistry, class III, 1959; M.Sc. (*in absentia*), 1963
Kenneth Herbert Ralph, B.Sc., with Honours in mechanical engineering, class III, 1964
Barr, Charles Stuart, M.A., with distinction, 1964
Michael Ernest, B.Sc., with Honours in civil engineering, class III, 1961
Barraclough, Margaret Ann, B.A., in special studies (sociology), 1962
Barratt, Anthony, B.Sc., 1962
Anthony Lloyd, B.Sc., in special studies (mathematics), 1962
Brian Anthony, LL.B., with Honours, class III, 1963
John Michael, B.Sc., with Honours in chemical engineering, class III, 1963
Robert James Ian, B.Sc., with Honours in civil engineering, class II(i), 1961
Barrett, John Harold, B.Sc., 1964
Mary Patricia, B.Sc., with Honours in mathematics, class III, 1964
Barrow, Richard, B.Sc., 1961
Barry, Michael Vincent, B.A., with Honours in English, class II(ii), 1958; M.A., 1960
Barr-Young, Gavin Neil, LL.B., with Honours, class III, 1961
Bartlett, Geoffrey, LL.B., with Honours, class II(ii), 1964
Jill Avril, B.A., with Honours in modern languages, class II(ii), 1961
Barton, Arthur Brian, B.A., with Honours in modern languages, class II(i), 1964
John Laing, M.B., Ch.B., 1961

Barton, Richard Henry, B.Sc., with Honours in metallurgy, class II(ii), 1964
Bartram, Allen Jeffrey, B.A., with Honours in geography, class II(i), 1962
Wendy Phyllis, B.A., with Honours in English, class II(ii), 1961
Barua, Dilip Kumar, M.A., with distinction, 1963
Barwell, John Allan, LL.B., with Honours, class III, 1964
Baser, Güngör, B.Sc., with Honours in textile industries, class II(ii), 1962
Bastiman, Brian, B.Sc., with Honours in agriculture, class II(i), 1964
Bastow, Robert Stansfield, B.Sc., with Honours in geology, class II(ii), 1963
Batchelor, Diana, B.A., with Honours in English, class II(ii), 1962
Bate, Jane Susan, B.A., with Honours in French, class II(ii), 1964
Bateni, Mohammad Reza, M.A., 1963
Bateson, John Barry, B.Sc., with Honours in agricultural chemistry, class II(i), 1963
Margaret Mary Elizabeth, B.A., with Honours in French, class III, 1963
Bathgate, John, B.Sc., 1961
Batson, Michael Wareham, B.Sc., with Honours in general studies, class III, 1963
Battersby, Pauline, B.A., in special studies (English), 1963
Batty, David, B.Sc., with Honours in colour chemistry, class II(ii), 1961
Michael, B.Sc., with Honours in mathematics, class I, 1961
Battye, Raymond, B.A., with Honours in economic history and geography, class III, 1964
Bavey, Chrysogen Noel, B.A., with Honours in English, class II(ii), 1961
Baxendale, Alison Vivian, M.B., Ch.B., with Honours, class II, 1964
Baxter, Anthony John, B.Sc., with Honours in physics, class II(i), 1964
David Eric, B.A., with Honours in philosophy and politics, class II(ii), 1963
Robert James, B.Sc., with Honours in mathematics, class I, 1963
Bayliss, John Leslie, B.Sc., with Honours in mechanical engineering, class III, 1963
Beach, Daphne Julia, B.Sc., with Honours in chemistry, class II(ii), 1963
Richard Arthur, B.Sc., with Honours in mathematics, class II(i), 1964
Beal, Peter Richardson, B.Sc., 1961
Beales, Wendy Elaine, B.A., with Honours in Latin, class III, 1964
Beard, David George, B.Ch.D., with Honours, class II, 1963
Beards, John Raymond, B.A., with Honours in economics, class II(i), 1963
Beardsworth, Philip, B.Sc., in general studies, 1962
Beasley, Richard Alan, B.A., with Honours in modern languages, class II(ii), 1961
Beatham, Anthony Francis, B.Sc., with Honours in civil engineering, class III, 1961
Beattie, Alec Norman, B.Sc., with Honours in fuel science, class II(i), 1963
Beaumont, Newham John, B.A., with Honours in French, class II(ii), 1964
Peter, B.Sc., with Honours in physics, class II(ii), 1964
Beaver, Anthony Roland, B.A., with Honours in history, class II(ii), 1961
Beavis, David John, B.Sc., with Honours in electrical engineering, class II(i), 1964
Beck, Leslie Scott, B.Sc., in special studies (geology), 1954; M.Sc. (*in absentia*), 1962
Becka, Leopoldo Nahum, Ph.D. (*in absentia*), 1961
Becker, Frank, B.Ch.D., 1961
Beckham, Michael Anthony, B.Sc., with Honours in chemical engineering, class II(i), 1961
Bedford, David James, B.Sc., 1961
Beeching, Jennifer, B.A., with Honours in Russian, class II(ii), 1962
Beety, Eric, B.A., with Honours in theology, class III, 1964
Beggs, Michael Christie, B.Sc., with Honours in mechanical engineering, class III, 1962
Behan, Peter Oliver, M.B., Ch.B., 1964
Belchamber, John Cedric, B.A., with Honours in German, class III, 1961
Beljakov, Vera, B.A., with Honours in Russian, class III, 1964
Belk, Geoffrey George, B.A., with Honours in history, class II(ii), 1964
Bell, Mrs. Anne Patricia, M.B., Ch.B., 1962
David Neil, B.A., with Honours in psychology and sociology, class II(i), 1964
David Stephen, B.A., with Honours in fine art and philosophy, class II(ii), 1964
Derek James, B.Sc., with Honours in electrical engineering, class II(i), 1964
Douglas John, B.A., with Honours in French, class II(ii), 1962
Elizabeth Margaret, B.A., with Honours in history, class III, 1963
Eric James, B.Sc., 1961

Bell, Evelyn Margaret, B.Sc., with Honours in general studies, class II(i), 1964
John Robert, Ph.D., 1960
Keith, B.Sc., with Honours in geology, class II(i), 1961
Malcolm McDonald, M.B., Ch.B., 1961
Michael William, B.A., with Honours in English, class III, 1964
Molly Elizabeth, B.A., with Honours in general studies, class III, 1961
Peter, B.A., with Honours in mathematics, class III, 1964
Bellis, Ronald John, B.Sc., with Honours in fuel science, class II(i), 1964
Belshaw, David John, LL.B., with Honours, class II(ii), 1961
Belton, Andrew, M.B., Ch.B., 1962
Benn, Julie, B.A., in general studies, 1964
Nicholas, M.B., Ch.B., 1960
Stephen Leonard, B.Sc., 1962
Bennett, Ernest Walter, Ph.D., 1960
Kenneth Peter, B.Sc., with Honours in fuel science, class II(ii), 1963
Benning, Michael Arthur, B.Sc., with Honours in chemical engineering, class II(ii), 1963
Benson, David Richard, B.A., with Honours in history, class II(ii), 1964
William Victor, B.Sc., with Honours in chemistry, class III, 1962
Bentall, Richard Hugh, B.Sc., with Honours in mechanical engineering, class I, 1962
Bentham, David, B.A., with Honours in economics, class II(ii), 1961
Bentley, Robert, B.Sc., with Honours in chemical engineering, class III, 1962
Roger Keith, B.Sc., with Honours in chemistry, class II(i), 1963
Stuart, B.A., with Honours in geography, class II(ii), 1963
Beresford, Peter John, B.A., with Honours in textile design, class III, 1962
Bernard, Eugene Edwin, Ph.D., 1960
Berntsen, Howard Neil, M.A., with distinction, 1962
Berridge, Phoebe, B.A., with Honours in German, class III, 1964
Berry, Colin Howard, B.Sc., with Honours in mechanical engineering, class II(ii), 1961
Dale Elizabeth, B.A., with Honours in sociology, class III, 1962
Bessey, Alexander Leonard Frank, B.A., in special studies (modern languages), 1961
Best, John Sheridan, B.Sc., with Honours in chemistry, class II(ii), 1961
Roger George, B.Com., with Honours, class II(i), 1964
Beswetherick, John Lloyd, B.A., with Honours in Latin, class II(ii), 1964
Beswick, Graham John, B.Com., with Honours, class II(ii), 1964
Betts, Christine Ann, B.A., with Honours in English, class II(i), 1964
James, B.Sc., with Honours in chemistry, class I, 1957; Ph.D., 1961
Marjorie Jane, B.A., with Honours in history, class II(ii), 1964
Bevans, Madeleine, M.A., 1964
Bewley, Albert Latham, B.A., with Honours in general studies, class II(i), 1961
Bexon, Ivan, B.Sc., with Honours in mining, class II(i), 1964
John Joseph, B.Sc., with Honours in chemistry, class III, 1961
Bhatt, Surendra Purushottam, B.Sc., 1962
Bhattacharya, Jyotibhusan, M.A. (*in absentia*), 1962
Bhatty, Faiz Ahmad, Ph.D. (*in absentia*), 1962
Bibby, John Ellison, B.Sc., 1964
Susan, B.A., with Honours in sociology, class II(ii), 1962
Bickerstaff, Kathleen, B.A., with Honours in Latin, class I, 1964
Bickerton, Terence John, B.Sc., with Honours in the chemistry of leather manufacture, class II(i), 1961
Bickley, Malcolm Leslie, B.Sc., with Honours in mining, class II, 1954; Ph.D., 1961
Biggar, Gordon McLaren, Ph.D., 1962
Biggs, Gillian Mary, B.A., with Honours in sociology, class III, 1963
Sandra, LL.B., with Honours, class III, 1962
Biglia, Umberto, B.Sc. (*in absentia*), 1962
Biglin, Peter, B.Sc., with Honours in agricultural chemistry, class II(ii), 1964
Bignall, Frank Leslie, B.A., with Honours in French, class III, 1964
Bignell, Alex Henry Cranfield, B.Sc., with Honours in chemistry, class III, 1963
Billam, Michael Ross Darden, B.A., with Honours in English and fine art, class II(i), 1963

## B

Bingham, Frank David, LL.B., with Honours, class II(i), 1961
James Michael William, B.Sc., with Honours in general studies, class III, 1962
Robert Graham, B.Sc., with Honours in general studies, class I, 1959; Ph.D. (*in absentia*), 1963
Binnersley, Edwin Keith, B.Sc., with Honours in chemical engineering, class I, 1958; Ph.D., 1961
Binns, Eric Spence, B.Sc., with Honours in agricultural zoology, class II(i), 1961
Freda Mollie, B.Sc., with Honours in general studies, class II(ii), 1961
Richard Anthony, B.Sc., with Honours in physics, class III, 1964
Biradar, Ningondappa Shenkreppa, Ph.D. (*in absentia*), 1960
Birch, David Robert, B.A., with Honours in geography, class II(ii), 1963
Ian Christopher, B.A., in special studies (sociology), 1962
Birchall, David Robert, B.Sc., with Honours in physics, class II(i), 1957; Ph.D., 1960
Peter, B.A., with Honours in modern languages, class II(i), 1961
Bircher, Lloyd Thomas, B.A., with Honours in English, class II(ii), 1961
Bircumshaw, Margaret, B.A., with Honours in sociology, class III, 1963
Bird, John Francis, LL.B., with Honours, class II(ii), 1964
Margaret, B.A., with Honours in theology, class III, 1961
Birnie, John Robertson, B.A., with Honours in English, class II(ii), 1962
Birtwistle, Jennifer, B.A., with Honours in sociology, class III, 1962
Kathleen, B.A., with Honours in history, class II(ii), 1963
Bishop, Joan Margaret, B.A., with Honours in French, class I, 1963
Merryn, B.A., with Honours in theology, class III, 1961
Bissoondatt, Rupert Hardeo, M.B., Ch.B., 1962
Biswas, Robindra Kumar, B.A., with Honours in English, class II(i), 1961
Blaby, Norman John, B.A., with Honours in German, class III, 1961
Black, Michael Anthony, B.Sc., with Honours in anatomy, class II(i), 1962
Blackburn, George, B.Sc., with Honours in physics, class II(i), 1961
John, B.A., with Honours in general studies, class III, 1961
Marjorie Letitia, B.A., with Honours in history, class II(ii), 1963
Peter Hugh, B.A., with Honours in philosophy and subsidiary French, class II(ii), 1962
Blacker, John Geoffrey, B.Sc., with Honours in colour chemistry, class II(i), 1961
Blackwell, Derek Anthony, B.Sc., with Honours in mechanical engineering, class II(ii), 1961
John, B.Sc., with Honours in chemistry, class II(ii), 1963
Patricia Ann, B.Sc., 1964
Trevor James, B.A., with Honours in English, class II(i), 1963
Blagden, Peter Arthur, B.Sc., with Honours in agriculture, class II(ii), 1964
Blain, Nova Barbara, B.A., with Honours in French, class II(ii), 1962
Blair, Ian, B.Sc., with Honours in civil engineering, class II(ii), 1963
Blakey, Catherine, B.A., with Honours in psychology, class II(ii), 1961
Selwyn Howard, B.Sc., 1964
Blamires, David Charles, B.A., with Honours in general studies, class II(ii), 1962
Bland, Geraldine, B.A., with Honours in general studies, class II(ii), 1962
Robert David, B.A., with Honours in general studies, class III, 1962
Blenkinsop, Paul Addyman, B.Sc., with Honours in metallurgy, class II(ii), 1961
Bligh, Donald Arthur, B.A., with Honours in geography, class II(ii), 1961
Blinkhorn, Derek, B.Sc., with Honours in physics, class III, 1963
Blizzard, Barrie John, B.Sc., with Honours in mechanical engineering, class III, 1963
Bloomfield, Keith, B.Sc., with Honours in geology, class II, 1951; M.Sc. (*in absentia*), 1956; Ph.D. (*in absentia*), 1964
Blows, Carole Angela, B.A., with Honours in English, class II(ii), 1964
Blundell, Janet, B.A., with Honours in geography and history, class II(ii), 1963
Blythe, Anne Elizabeth, B.A., with Honours in history, class II(ii), 1964
Harry Jarratt, Ph.D., 1962
Boadu, Atta-Owusu, LL.B., with Honours, class III, 1962
Boag, Beverley John, B.Sc., with Honours in electrical engineering, class III, 1964

Boam, Roberta Frances, B.A., with Honours in English and history, class II(ii), 1963
Boateng, Bernard Mensah, B.Com., 1963
Bocock, Robert James, B.A., with Honours in sociology and philosophy, class II(ii), 1962
Boddy, Hugh Michael, B.A., with Honours in sociology, class II(ii), 1963
Bodger, Hugh Lynch, B.Com., with Honours, class II(ii), 1962
Bodikian, Reuben Sebou, B.A., with Honours in textile design, class III, 1963
Boga, Ramzan Kasamali, M.Sc., 1964
Bold, Margaret Elaine, B.A., with Honours in French, class II(ii), 1961
Bolland, James Anthony Keith, B.Sc., with Honours in chemical engineering, class III, 1962
Bolter, James Ian, B.Sc., with Honours in chemical engineering, class III, 1961
Bolton, Andrew, B.Sc., with Honours in general studies, class II(ii), 1962
Brenda, Margaret B.A., with Honours in history, class II(ii), 1961; M.A., 1963
John, B.Sc., with Honours in chemistry, class II, 1952; M.Sc., 1964
Paul Anthony, B.A., with Honours in history, class II(ii), 1961
Bone, Peter John, B.A., with Honours in history, class II(i), 1961
Bonner, Jacqueline Anne, B.A., with Honours in French, class II(ii), 1964
Bonser, John William Allen, B.Sc., 1962
Stephen David, B.Sc., 1962
Boocock, Sharron, B.A., with Honours in English, class II(ii), 1962
Bookless, Thomas Charles, B.A., with Honours in Spanish, class II(ii), 1961
Bool, John, B.A., with Honours in geography, class II(ii), 1964
Booth, Alan, B.A., with Honours in geography, class II(i), 1964
Anthony Michael, B.Sc., with Honours in mechanical engineering, class II(i), 1964
Geoffrey, B.Sc., with Honours in physics, class III, 1962
Michael Lewis, B.A., with Honours in textile design, class II(ii), 1961
Michael Roy, B.Sc., with Honours in chemistry, class II(ii), 1963
Terence, B.Com., with Honours, class II(i), 1961
William Harold, B.A., with Honours in music, class II(i), 1962; B.Mus., with distinction, 1963
Boothman, Eleanor, B.Sc., with Honours in chemistry, class II(i), 1962
Boothroyd, Peter, B.Com., with Honours, class II(ii), 1963
Borel, Ainsley George, B.Com., 1962
Borrill, John Frederick Cooper, B.Sc., with Honours in mechanical engineering, class II(i), 1961
Bosnell, John Robert, B.Sc., with Honours in physics, class I, 1962
Boswell, James Michael, B.Sc., with Honours in civil engineering, class II(ii), 1962
Botterill, David Malcolm, B.A., with Honours in geography, class II(i), 1961
Bottomley, David Charles, B.A., with Honours in textile design, class III, 1963
William John, LL.B., with Honours, class II(ii), 1963
Bouchard, Kenneth Anthony, B.Sc., with Honours in agricultural studies, class II(ii), 1962
Boulton, Neal Anthony, B.A., with Honours in economics, class II(ii), 1961
Bourne, Eric, B.Sc., with Honours in mechanical engineering, class I, 1962
Bower, Jeffrey, LL.B., with Honours, class II(i), 1963
Margaret, B.A., with Honours in economics and history, class II(ii), 1963
Bowers, Arthur Patrick, B.Sc., 1963
John Hilton, B.Sc., with Honours in physics, class II(ii), 1963
Robin, B.Sc. (agricultural studies), 1961
Roger Gordon, B.Sc., 1964
Bowler, Joan, B.A., with Honours in modern languages, class III, 1961
Bowles, Alexander Thomas Clifford, B.Sc. (agricultural studies), 1961
Bowman, Jean, B.Sc., with Honours in general studies, class II(ii), 1962
Michael John, B.A., with Honours in French, class II(ii), 1963
Boyd, Nigel David, B.Sc., with Honours in chemistry, class II(ii), 1963
Boydell, Colin William, B.A., with Honours in geography and history, class II(ii), 1964
Boyle, Michael James, B.Sc., 1961
Boynton, Ann Priscilla, B.A., with Honours in English and fine art, class II(ii), 1963

## B

Bracewell, Edward, B.Sc., with Honours in civil engineering, class II(ii), 1964
Bradburn, John Stanley, B.Sc., with Honours in fuel science, class II(i), 1964
Bradbury, Denise Alicia, B.A., with Honours in Russian, class III, 1962
Josephine Winifred, B.A., with Honours in Spanish, class III, 1963
Joyce Elizabeth, LL.B., with Honours, class II(ii), 1961
Walter William, B.Sc., with Honours in mathematics, class II(i), 1964
Brader, Richard, B.A., with Honours in German, class II(ii), 1961
Bradfield, Dennis William, B.A., in general studies, 1961
Bradford, Valerie, B.A., with Honours in English, class II(ii), 1964
Bradley, Joan, B.A., with Honours in French, class II(i), 1963
Margaret, B.A., with Honours in general studies, class III, 1963
Margaret Anne, B.A., with Honours in economics, class II(i), 1961
Pauline, B.A., with Honours in general studies, class III, 1961
Pauline, B.A., with Honours in French, class II(ii), 1963
Peter Thomas, B.A., with Honours in Spanish, class II(i), 1964
Robert, B.Sc., with Honours in agricultural studies, class I, 1962
William Anthony, B.A., with Honours in geography, class II(i), 1961; M.A., 1964
Bradshaw, David Wilson, B.Sc., 1963
Frances, LL.B., with Honours, class III, 1962
Thomas Alan, B.Sc., with Honours in mechanical engineering, class I, 1955; Ph.D., 1961
Brady, Peter, B.A., with Honours in fine art and philosophy, class III, 1963
Braine, Juliet Marjorie, B.A., with Honours in psychology and sociology, class II(ii), 1964
Bramble, Peter Frederick, B.A., with Honours in French, class III, 1963
Branam, Harold Frank, B.A., with Honours in English, class III, 1961
Brand, Edward William, B.Sc., with Honours in civil engineering, class II(i), 1960; Ph.D., 1963
Branson, Eric Arthur, B.Sc., in general studies, 1961
Branston, Peter Stuart, B.A., with Honours in psychology and sociology, class II(ii), 1964
William Arthur, B.Sc., with Honours in civil engineering, class II(i), 1963
Brant, Michael Rownayne, B.Sc., with Honours in physics, class II(ii), 1961
Brass, Peter Selby, B.Sc., in general studies, 1961
Bratt, Margaret Constance, B.A., with Honours in English, class II(ii), 1962
Bratton, Peter, B.Sc., with Honours in general studies, class II(ii), 1964
Braun, Georg Ritter, B.Sc., 1962
Bray, William Ernest, B.Sc., with Honours in agricultural studies, class II(i), 1962
Brayne, Martin Leslie, B.A., with Honours in geography, class II(ii), 1964
Brayshaw, Judith Anne, B.A., with Honours in history, class II(ii), 1962
Breare, Kenneth Herbert, B.Ch.D., 1963
Brearley, John Stuart, B.Sc., 1964
Breeze, Judith, B.A., with Honours in French, class II(i), 1962
Breffitt, John Andrew, B.Sc., with Honours in pharmacy, class II(ii), 1963
Brend, Veronica, B.A., with Honours in English, class III, 1961
Brennan, Elizabeth Irene, B.A., with Honours in philosophy and English, class II(i), 1962
Kevin Malachy, B.Sc., with Honours in mathematics, class II(i), 1962
Mary Estelle, M.B., Ch.B., 1962
Michael, B.A., with Honours in English, class II(ii), 1961
Michael Aidan, B.A., with Honours in geography and history, class II(i), 1964
Thomas, M.Ed., 1962
Brent, Michael Brent, B.Sc., with Honours in physics, class II(i), 1962
Brenton, Antoinette, B.A., with Honours in English, class II(ii), 1963
Bresloff, David Michael, B.Sc., with Honours in general studies, class II(i), 1961
Paul, B.Sc., with Honours in biochemistry, class III, 1964
Bretherick, Paul John, M.B., Ch.B., 1961
Brett, David William, B.Sc., with Honours in general studies, class II(ii), 1961
Joan, B.A., with Honours in general studies, class III, 1964
Brewster, Keith Rodney, B.A., with Honours in English, class II(ii), 1962
Mrs. (see Hannam, Patricia Ann)

Bridge, Bryan, B.Sc., with Honours in physics, class II(i), 1962
George Louis, B.Sc., with Honours in chemical engineering, class II(ii), 1964
Bridges, Paul Richard, B.Sc., with Honours in general studies, class II(i), 1963
Brierley, Jane Alison, B.Sc., with Honours in general studies, class III, 1964
Rowland John Porter, B.Sc., with Honours in chemical engineering, class II(i) 1962
Briggs, David Anthony, B.Sc., with Honours in physics, class I, 1963
Geoffrey Gower, B.Sc., with Honours in chemistry, class II(ii), 1961
Howard Julian, B.Com., with Honours, class III, 1962
Jeremy Philip, B.Sc., with Honours in zoology, class II(ii), 1964
John, B.A., with Honours in theology, class II(ii), 1961
Brightman, Robin Gordon, B.Sc., with Honours in civil engineering, class II(ii), 1963
Brinkley, Richard, B.A., with Honours in English, class II(i), 1964
Brinkworth, Robert Anthony, B.Sc., with Honours in colour chemistry, class III, 1958; M.Sc., 1961
Brisby, John Clifford, B.Sc., with Honours in civil engineering, class II(ii), 1964
Briscoe, Keith, B.A., with Honours in geography, class II(ii), 1963
Brittan, Valerie Ann, B.Sc., with Honours in general studies, class III, 1962
Britton, John Guy, B.A., with Honours in general studies, class II(i), 1961
Broadbent, Arthur Douglas, B.Sc., with Honours in colour chemistry, class I, 1961
Christine Stephanie, B.A., with Honours in general studies, class III, 1961
John Christopher, B.A., with Honours in geography and history, class II(ii), 1963
John Edward Alexander, B.Sc., with Honours in textile engineering, class II(i), 1961
Broadfield, Norman Edward, B.A., with Honours in psychology and sociology, class II(ii), 1963
Broadgate, Anthony David, B.Sc., with Honours in mechanical engineering, class III, 1961
Broadhead, James Arthur, B.Sc., with Honours in the chemistry of leather manufacture, class III, 1961
Brock, Mrs. Beverley May, M.A., with distinction (*in absentia*), 1963
Brockbank, Alice Mary, B.Sc., 1964
John, B.Sc., with Honours in general studies, class III, 1962
Margaret Jane, B.Sc., with Honours in general studies, class III, 1964
Brook, Anthony John Warwick, B.Sc., with Honours in chemistry, class II(i), 1957; Ph.D., 1960
Christine Mary, M.B., Ch.B., 1962
Josephine Marian, B.A., with Honours in English, class III, 1964
Peter John, B.Sc. (agricultural studies), 1963
Richard John, B.Sc., with Honours in ceramics, class I, 1962
Richard Laird, B.A., with Honours in general studies, class I, 1963
Stuart, B.Sc., with Honours in textile physics, class II, 1957; Ph.D., 1962
Brooke, Anthony, B.Ch.D., 1962
Brookes, Austin, B.Sc., with Honours in geology, class II(ii), 1961
Brookfield, Anne, B.Sc., with Honours in agricultural chemistry, class II(i), 1964
David Walter, B.A., with Honours in sociology, class III, 1963
Brooks, Brian Walter, B.Sc., with Honours in chemistry, class II(ii), 1960; Ph.D. (*in absentia*), 1964
Frank Wilkinson, B.Sc., with Honours in leather science, class II(ii), 1963
Valerie Ruth, B.Sc., 1964
Broom, Jacqueline Margaret, B.Sc., in special studies (mathematics), 1963
Broome, David Curtis, B.A., with Honours in philosophy and history, class III, 1963
Brophy, Denis Patrick, B.Sc., with Honours in general studies, class III, 1961
Brotherston, James Gordon, B.A., with Honours in Spanish, class I, 1961
Brown, Alan James, B.Sc., with Honours in general studies, class II(ii), 1961
Alwyne Heyworth, B.A., with Honours in classics, class II(ii), 1962
David Foord, B.A., with Honours in sociology, class II(ii), 1961
David Martin, B.Sc., with Honours in chemistry, class I, 1963
Donald, B.Sc., 1963
Douglas William, B.Sc., with Honours in chemistry, class III, 1964

## B

Brown, Gillian Margaret, B.A., with Honours in philosophy and subsidiary French, class II(i), 1964
Greta Forsyth, B.A., with Honours in history, class III, 1964
Iain Forrest, B.A., with Honours in economics, class II(ii), 1964
Jeffrey George Christopher, B.Com., 1962
Jennifer, B.Sc., with Honours in botany, class II(i), 1962
Joan Hannah Margaret, B.A., with Honours in Russian, class II(i), 1963
Joseph Henry, B.Sc., with Honours in mining, class I, 1962
Judith Mary, B.A., in special studies (French) (*aegrotat*), 1962
John Kenneth, B.Sc., 1961
Mary Elizabeth, B.Sc., with Honours in mathematics, class II(i), 1961
Michael David, B.Sc., 1964
Paul Hedley, B.Sc., with Honours in physics, class II(ii), 1961
Peter, B.Sc., with Honours in textile industries, class II(i), 1962
Robert James, B.Sc., 1964
Robert Malcolm, B.Sc., 1964
Robert Stephen Beck, B.Sc., with Honours in general studies, class III, 1963; with Honours in zoology, class III, 1964
Sheila Margaret, B.Sc., with Honours in mathematics, class III, 1961
Brownbridge, David John, B.A., with Honours in English, class II(i), 1964
John Clive, B.Sc., in special studies (physics), 1964
Brumby, Stanley, B.A., in special studies (French), 1962
Brumfitt, Geoffrey, B.Sc., with Honours in chemistry, class II(i), 1961
Brunt, Rodney Vincent, B.Sc., with Honours in biochemistry, class II(i), 1957; Ph.D., 1960
Bryan, Charles Rigney, M.A., 1960
Bryant, James Mitchell, B.Sc., in general studies, 1964
Bryson, Ian Crawford, B.A., with Honours in Russian, class II(ii), 1964
Buckels, Susan, B.Sc., with Honours in botany, class II(i), 1961
Buckle, Jeffrey, B.Sc., 1962
Buckley, Brian Bertrand, B.Com., 1961
Colin, B.A., with Honours in general studies, class III, 1961
Martin Wilfred, B.Com., with Honours, class III, 1964
William Derek, B.Sc., with Honours in physics, class II(ii), 1962
Budd, Keith, M.B., Ch.B., 1962
Malcolm, B.Sc., 1962
Budding, John, B.Sc., with Honours in colour chemistry, class I, 1958; Ph.D., 1961
Buggé, Jacqueline, B.A., with Honours in French, class II(i), 1964
Buisson, John Savile, M.B., Ch.B., 1961
Bulfield, Grahame John, B.Sc., with Honours in agriculture, class II(i), 1964
Bull, Royston Philip, B.A., with Honours in Russian, class III, 1961
Bullivant, Roger Alfred, B.Sc., 1962
Bullock, Elizabeth Kathleen, M.B., Ch.B., 1960
Ian, B.A., with Honours in geography, class II(ii), 1964
Peter, M.Sc., 1964
Bullough, Frances Stewart, B.Sc., with Honours in general studies, class I, 1963
Bulmer, Roger Stuart, B.Sc., with Honours in chemistry, class I, 1964
Ronald Joseph Sanders, B.Ch.D., 1964
Bunch, Geoffrey Alan, M.B., Ch.B., 1961
Bunn, Albert Keith, B.Sc., with Honours in electrical engineering, class II(i), 1964
Bunten, Richard Nash, B.A., with Honours in geography, class III, 1964
Buntman, Roy Michael, B.Com., 1962
Burch, Hilary Wynne, B.A., in general studies, 1963
Burchell, Michael Norman, B.Sc., with Honours in mining, class II(i), 1962
Burcher, Roy Robert, B.A., with Honours in general studies, class II(i), 1962
Burdett, Brian Cyril, B.Sc., 1957; M.Sc., 1960
Cedric Francis, B.Sc., with Honours in metallurgy, class II(i), 1962
Burditt, Veronica Brenda, B.A., with Honours in theology, class III, 1964

Burfitt, Elizabeth Margaret, B.A., with Honours in English and fine art, class II(ii), 1964
Richard Harrisson, B.Sc., with Honours in civil engineering, class II(i), 1963
Burger, André Eric, B.Sc., with Honours in general studies, class III, 1961
Burgess, Ian Robertson Aiton, B.Sc., 1963
Burke, Kenneth Brian Sadler, B.Sc., 1957; with Honours in mining, class I, 1958; Ph.D. (*in absentia*), 1961
Michael Richard, B.A., with Honours in history, class II(i), 1962
Burles, Teresa Mary, B.A., with Honours in Spanish, class II(ii), 1964
Burley, Roger Weston, B.Sc., with Honours in chemical engineering, class II(ii), 1964
Burnell, John Edward, B.Sc., with Honours in mathematics, class II(ii), 1964
Malcolm David, B.A., with Honours in general studies, class III, 1963
Burnham, Michael, B.Ch.D., 1963
Burns, Joan Adele, B.A., with Honours in English and history, class II(ii), 1963
Marca, Ph.D., 1962
Burrington, Douglas Franklin Hugh, B.A., with Honours in German, class II(i), 1962
Burrow, Graham Harvey, B.Sc., with Honours in the chemistry of leather manufacture, class III, 1961
Burrows, Darryl Benfield, B.Sc., 1961
John William, B.Sc., with Honours in civil engineering, class II(i), 1964
Nicholas Charles Ernest, B.Sc., with Honours in civil engineering, class III, 1962
Robert William Reginald, B.Com., 1961
Burston, Richard Alan, B.Sc., with Honours in agriculture, class II(ii), 1964
Burton, Ian Keith, B.A., with Honours in English, class II(i), 1963
John Michael, B.Sc., 1964
Geoffrey Norman, B.A., with Honours in modern languages, class II(i), 1962
Buset, Kjetil, B.Sc., 1962
Busfield, Walter Kenneth, B.Sc., with Honours in chemistry, class II(i), 1957; Ph.D. (*in absentia*), 1960
Bush, Brian, B.Sc., with Honours in chemistry, class II(ii), 1957; Ph.D., 1963
Christopher Norman, B.Sc., with Honours in mining, class II(i), 1961
Margaret Mary, B.A., in general studies, 1962
Peter, B.Sc., with Honours in physics, class III, 1961
Bushell, Roger, B.Sc., 1963
Bussey, Michael Ronald, B.Sc., with Honours in electrical engineering, class III, 1964
Bust, Eric William, B.Sc., with Honours in chemical engineering, class II(ii), 1961
Butcher, Christopher Ben, B.A., with Honours in general studies, class III, 1961
Butler, Barry, B.Sc., with Honours in metallurgy, class II(ii), 1962
Elizabeth Ellen, B.Sc., with Honours in mathematics, class II(i), 1963
Ernest Paul, B.Sc., with Honours in metallurgy, class I, 1964
John, B.Sc., 1962
Joseph Aloysius, B.A., with Honours in economics, class II(ii), 1963
Philip John, B.Sc., with Honours in chemistry, class II(ii), 1961
Thomas Frederick, B.Sc., with Honours in electrical engineering, class I, 1961; M.Sc., 1962
Butterfield, Colin, B.Sc., with Honours in chemical engineering, class III, 1961
Lesley Janet, B.A., with Honours in French, class II(ii), 1963
Butters, Ann Peterkin, B.Ch.D., 1961
Butterworth, Allen, B.A., with Honours in classics, class II(i), 1962
Michael Lord, B.Sc., with Honours in physics, class II(i), 1963
Buttle, Susan Joan, B.A., with Honours in general studies, class II(ii), 1963
Byas, John Beverley, B.A., with Honours in general studies, class II(i), 1962
Byrne, Ann Patricia, B.A., in special studies (history), 1962
Michael John, B.Sc., with Honours in chemistry, class II(ii), 1958; Ph.D. (*in absentia*), 1963
Bywater, Murray Lloyd, B.Sc., with Honours in mechanical engineering, class II(i), 1961

Cadden, Geoffrey, B.A., with Honours in German, class II(i), 1963
Caine, Thomas Nelson, B.A., with Honours in geography, class I, 1961; M.A. (*in absentia*), 1962
Cainen, Joseph Brian, B.A., with Honours in Italian, class II(i), 1964
Caines, Raymond Michael, B.Sc., 1964
Cairns, Clare Josephine Hamilton, B.A., with Honours in textile design, class III, 1961
Christopher Shannon, B.A., with Honours in Italian, class II(i), 1964
Caisley, John, B.Sc., with Honours in metallurgy, class II(i), 1961
Calder, Christopher John Brearley, B.Sc., with Honours in general studies, class II(ii), 1963
Caldwell, Eric, B.A., with Honours in modern languages, class III, 1963
Tom Berry, Ph.D., 1962
Calverley, Arthur Knowles, B.A., with Honours in general studies, class III, 1963
Calvert, Barry, B.A., with Honours in history, class III, 1961
Hedley Lawrence, B.Sc., with Honours in biochemistry, class III, 1963
Matthew Hugo, B.Sc., with Honours in anatomy, class II(i), 1961
Valerie Elizabeth, B.A., with Honours in English, class II(ii), 1962
Valerie Sue, B.A., in general studies, 1961
Campbell, John Brian, B.Sc., 1961
Campion, Elizabeth, B.A., in special studies (history), 1962
Thomas Howard, B.Sc., with Honours in chemistry, class II(i), 1962
Campton, Timothy John, B.Sc., 1963
Candy, David John, B.Sc., with Honours in biochemistry, class II(i), 1958; Ph.D., 1961
Cannell, Mona Hilary, B.A., with Honours in geography, class II(i), 1964
Cant, Margaret, B.A., in special studies (English), 1962
Canva, Mrs. (see Conlay, Jennifer Jane)
Capper, Maureen Elizabeth, M.B., Ch.B., 1963
Carabine, Keith, B.A., with Honours in English, class II(i), 1962; M.A., 1964
Carballo, Manuel, B.A., in combined studies (psychology and sociology), 1963
Cardno, Peter John, B.Sc., with Honours in chemistry, class I, 1961
Carleton, Alan John, B.Sc., with Honours in chemical engineering, class II(i), 1962
Carley, Ann Patricia, B.A., in special studies (French), 1961
Carman, John Brian, B.Sc., with Honours in chemical engineering, class II(i), 1962
Carr, Alan, B.Sc., with Honours in chemistry, class III, 1962
David Harold, B.Sc., with Honours in electrical engineering, class II(ii), 1964
David Howard, B.Sc., with Honours in civil engineering, class II(i), 1964
Gordon, B.A., with Honours in Russian, class II(i), 1963
Wilfred Aldbrough, B.A., in special studies (history), 1964
Carruthers, Joseph, B.Sc. (agricultural studies), 1963
Carter, Andrew Roger, B.A., with Honours in music, class III, 1961
Anthony Gerald, B.Sc., 1961
Charles Marcus Christopher, B.Sc., with Honours in mathematics, class II(i), 1963
Colin Frederick, B.Sc., with Honours in colour chemistry, class II(ii), 1963
David Arthur, M.B., Ch.B., 1960
Frederick Thomas, B.A., with Honours in Spanish, class II(ii), 1964
George David, B.A., with Honours in history, class III, 1963
Ian Paul, B.Sc., 1964
Julia, B.A., with Honours in English, class II(ii), 1961
Peter, B.Sc., with Honours in physics, class I, 1961
Robert Harry, B.Sc., 1964
Cartledge, Brian, B.Sc., 1962
Rosemary Jean, B.A., in special studies (theology), 1964
Cartwright, Anthony Caswell, B.Sc., with Honours in pharmacy, class III, 1961
Brian, B.Sc., with Honours in textile chemistry, class II(ii), 1963
Brian Smith, B.Sc., with Honours in chemistry, class II(i), 1961
Ian Ralph, LL.B., with Honours, class III, 1962
Lionel Neville, B.Sc., with Honours in general studies, class II(i), 1962
Carver, Judith, B.A., with Honours in French, class III, 1961
Margaret Elizabeth, M.B., Ch.B., 1964

Casanave, Don Sheldon, M.A. (*in absentia*), 1963
Case, Geoffrey Lewis, B.Sc., 1964
Cashman, John Oliver, B.Sc., 1963
Castles, Francis Geoffrey, B.A., with Honours in sociology, class II(ii), 1964
Castree, Ann Valerie, B.A., with Honours in general studies, class III, 1961
Catterall, Nigel David Heman, B.Com., with Honours, class III, 1961
Peter John Rishton, B.Com., with Honours, class II(ii), 1964
Caudle, Brian Eric, B.Sc., with Honours in electrical engineering, class III, 1961
Caulfield, Gerard Michael, B.A., with Honours in geography and history, class II(i) 1964
Causton, David Robert Crampton, B.Sc. (agricultural studies), 1961
Cave, Lorna, B.A., with Honours in Spanish, class III, 1961
Lynette Mary, B.A., with Honours in sociology, class II(ii), 1963
Cavell, Barry, B.A., with Honours in general studies, class II(ii), 1961
Caveney, Terence Austin, B.Sc., with Honours in gas engineering, class II(ii), 1961
Caves, Francis John, B.Sc., 1964
Ian Bevan Tailby, B.A., with Honours in geography and history, class II(i), 1964
Cawkwell, Alan Robert, B.Sc., with Honours in gas engineering, class II(i), 1962
Cawood, Michael John, B.Sc., with Honours in physics, class III, 1962
Cazalet, Francis Michael, B.Sc., 1962
Chadd, Elizabeth Anne, B.A., with Honours in general studies, class III, 1964
Chadwick, Ann, B.Sc., with Honours in chemistry, class II(ii), 1963
Anthony Robert, B.A., with Honours in philosophy and history, class II(ii), 1963
Denis Michael, B.Com., with Honours, class II(i), 1964
Neil, B.A., in special studies (sociology), 1963
Richard Willmot, B.Sc., with Honours in mining, class I, 1964
Susan, B.A., with Honours in sociology, class III, 1964
Chaffer, Thomas, B.A., with Honours in general studies, class III, 1961
Chakrabortti, Sushil Kumar, B.Sc., 1961; M.Sc., 1963
Chakraborty, Samir Chandra, B.Sc., 1961
Chakravarti, Avijit, M.Sc., 1964
Chalk, Donald William, B.A., with Honours in sociology, class III, 1963
Challen, Barbara Joy, B.A., with Honours in philosophy and history, class I, 1964
Challinor, Edward John, B.A., with Honours in English, class III, 1964
Chalmers, Charles Duncan, B.A., with Honours in history, class II(i), 1961; M.A., 1963
Chamberlain, Alan Gregory, B.A., in special studies (history), 1964
Clive Terence, B.Sc., with Honours in fuel science, class I, 1964
Enid Mary, B.Sc., with Honours in bacteriology, class I, 1964
John Stanley, B.A., with Honours in English, class II(ii), 1959; M.A., 1961
William Anthony, B.Com., with Honours, class II(ii), 1963
Chambers, Austin, B.Sc., with Honours in physics, class II(i), 1961
Brian Ivor, B.Sc., 1963
Kathleen Margaret, B.A., with Honours in Italian, class II(i), 1962
Linda, B.A., with Honours in English, class II(i), 1964
Michael Geoffrey, B.A., with Honours in general studies, class III, 1962
William Barrie, B.A., in special studies (philosophy and politics), 1961
Chan, Bruce Andrew, B.A., with Honours in general studies, class II(i), 1962
Channell, Ian Brackenbury, B.A., with Honours in psychology and sociology, class II(i), 1963
Chantrey, Graham, B.Sc., with Honours in colour chemistry, class II(i), 1964
Chapman, David Allott, B.Sc., 1961
Michael Robin, B.A., with Honours in general studies, class II(ii), 1961
Paul Whiteley, B.A., with Honours in general studies, class II(ii), 1961
Peter John, B.Sc., with Honours in biochemistry, class I, 1958; Ph.D. (*in absentia*), 1961
Roger Greville, B.Sc., in special studies (physics), 1964
Chappell, Alvar Peter, B.Sc., with Honours in mechanical engineering, class III, 1962
Leslie Harold, B.Sc., with Honours in zoology, class II(i), 1964
Charge, Christopher, B.Sc., 1964

Charnley, John Neil, B.A., with Honours in modern languages, class II(ii), 1961
Charnock, William, B.Sc., with Honours in metallurgy, class I, 1963
Chatterton, Jill, B.A., with Honours in French, class III, 1964
Chaudhari, Vijaykumar Tukaram, M.Sc., 1963
Chauhan, Rameshchandra Popatlal, M.B., Ch.B., 1963
Chavda, Vijaysingh Kishansingh, Ph.D. (*in absentia*), 1961
Cheatle, Christopher Robert David, B.A., with Honours in sociology and philosophy, class III, 1963
Chekuri, Nageswara Srirama Prasada Varma, Ph.D., 1960
Chen, Donald Chung Chieh, B.Sc., with Honours in fuel science, class I, 1962
Cherrill, David Edward, B.Sc., with Honours in chemical engineering, class III, 1963
Cherriman, Colin Wilfred, B.A., with Honours in general studies, class III, 1963
Cherry, Peter Denham, B.Sc., 1964
Cheshire, Ann Marion, B.A., with Honours in Spanish, class III, 1962
Chetwood, Jean Lynda, B.A., with Honours in philosophy and English literature, class II(ii), 1963
Chevins, Peter Frederick David, B.Sc., with Honours in zoology, class I, 1964
Chidley, Thomas Robert Edward, B.Sc., with Honours in civil engineering, class II(ii), 1961; Ph.D., 1964
Child, David Brian, LL.B. (*aegrotat*), 1961
Valerie, B.A., with Honours in French, class II(ii), 1964
Chilton, John Michael, B.Sc., with Honours in metallurgy, class II(i), 1962
Chinn, Stephen John, B.Sc., with Honours in chemistry, class III, 1964
Chinnery, Mrs. (see Holdsworth, Mary Josephine)
Chinoy, Zahir Mohammedhusain, B.Sc., with Honours in mechanical engineering, class II(ii), 1963
Chorlton, Bernice Anne, B.Sc., with Honours in biochemistry, class I, 1961
Choudhary, Hirdya Nand, B.Sc., 1964
Sheodayal, B.Sc., with Honours in mining, class III, 1962
Chrispin, Gerard Andrew, LL.B., with Honours, class III, 1961
Chronowicz, Albin Wladimir, Ph.D., 1963
Church, John Christopher, B.Com., 1961
Peter Brian, B.Sc., with Honours in physics, class II(ii), 1964
Claber, Michael Anthony, B.Sc., with Honours in mining, class II(ii), 1963
Clague, Peter Ernest, B.Sc., with Honours in chemistry, class II(ii), 1962
Clamp, John Hendry, B.A., with Honours in philosophy and English literature, class II(ii), 1964
Clare, Alan Charles, B.Sc., with Honours in mechanical engineering, class III, 1960
Christine Elisabeth, B.A., in special studies (theology), 1964
Peter Daniel, B.A., with Honours in economics, class III, 1961
Claridge, Edwin, B.Sc., with Honours in physics, class II(i), 1963
Clark, Anne, B.A., with Honours in modern languages, class II(i), 1964
Barbara Joan, B.A., with Honours in georgraphy and history, class II(ii), 1962
Bernard Martin, B.Sc., with Honours in general studies, class II(ii), 1962
David Ernest, M.B., Ch.B., 1960
John Anthony, B.A., with Honours in sociology, class II(ii), 1962
Keith Gordon, B.A., with Honours in economics, class III, 1964
Lewis, B.Sc., with Honours in geology, class II(i), 1960; Ph.D., 1963
Malcolm Colin, B.Sc., with Honours in colour chemistry, class I, 1958; Ph.D., 1961
Margaret, B.A., with Honours in Russian, class III, 1963
Michael Lawler, B.Sc., with Honours in general studies, class I, 1958; with Honours in zoology, class II(i), 1959; Ph.D., 1963
Peter John, B.Sc., with Honours in general studies, class II(i), 1961
Richard John, B.A., with Honours in textile design, class II(ii), 1962
Robin, B.A., with Honours in economics, class II(ii), 1964
Ronald David, B.Sc., with Honours in chemistry, class I, 1959; Ph.D. (*in absentia*), 1962
Thomas Alan, B.Sc., with Honours in physics, class I, 1959; Ph.D. (*in absentia*), 1963

Clarke, Giles Thomas Roderick, B.A., with Honours in geography, class III, 1964
Heather Fisher, B.Sc., 1962
Martin James, B.Sc. (agricultural studies), 1962
Michael, B.A., with Honours in French, class II(i), 1962
Rose Marie, B.A., in general studies, 1961
Valerie, B.Sc., with Honours in pharmacy, class (II)ii, 1964
Clarkson, Alan David, M.B., Ch.B., 1964
William Peter, B.Sc., with Honours in general studies, class II(ii), 1961
Clayborough, Arthur, Ph.D. (*in absentia*), 1964
Clayden, Brian Peter, B.Sc., with Honours in civil engineering, class II(i), 1960; M.Sc., 1961
Clayton, Graham, B.A., with Honours in geography and history, class III, 1962
John Reginald, B.Ch.D., 1963
Margaret Beatrice, M.A., 1964
Neville Stuart, B.Sc., with Honours in physics, class II(ii), 1959; M.Sc., 1962
Paul Anthony, B.Sc., with Honours in chemistry, class II(i), 1961
Susan, B.A., with Honours in general studies, class II(ii), 1962
Cleland, Ivan David, B.A., with Honours in history, class II(i), 1962
Jean, B.A., with Honours in general studies, class III, 1962
Clements, Mrs. Edwina Christine, B.A., with Honours in Latin, class III, 1963
Ian Edwin, B.Ch.D., 1961
Janice, B.A., with Honours in French, class II(ii), 1964
Clemmet, Michael Barry, B.Sc., 1963
Clemo, David Theodore Spargo, B.Sc., with Honours in civil engineering, class III, 1962
Clerehugh, Ian, B.Sc., with Honours in chemistry, class II(ii), 1963
Cliffe, Gerard Frederick, B.Sc., with Honours in chemical engineering, class III, 1962
Clifford, John Ogden, B.Sc., with Honours in chemistry, class II(i), 1963
Reginald James, B.Sc., with Honours in general studies, class I, 1963
Clifton, Peter Leslie, B.Sc., 1964
Clough, Alister Robert John, B.Sc., with Honours in ceramics, class II(i), 1961
Christopher John, B.Sc., with Honours in civil engineering, class I, 1963
Frances Mary, B.A., in special studies (geography), 1961
Cluley, Andrew Peter, B.Sc., with Honours in mechanical engineering, class III, 1962
Coates, Bryan Ellis, B.A., with Honours in geography, class II(i), 1955; M.A., 1960
Grahame John Robert, B.A., with Honours in political studies, class II(ii), 1964
Roger Alfred, B.Sc., with Honours in electrical engineering, class II(ii), 1962
Cobb, Alec Sidney, B.Sc., with Honours in colour chemistry, class II(i), 1962
Cockburn, James Swanston, LL.M., 1961
Cockcroft, Derek, B.Sc., with Honours in general studies, class II(ii), 1962
Cocker, Alan Joseph, B.Sc., with Honours in chemistry, class II(ii), 1957; Ph.D., 1961
Cockerill, Thomas Anthony John, B.A., with Honours in general studies, class III, 1962
Coddington, Alan, B.Sc., with Honours in physics, class II(ii), 1963
Codling, Reginald Ian, B.Sc., with Honours in civil engineering, class I, 1961
Coghlan, John Stephen Edward, B.Sc., with Honours in civil engineering, class II(ii), 1963
Coggan, Ruth Evelyn, M.B., Ch.B., 1963
Cohen, David Laurence, B.Sc., with Honours in general studies, class II(i), 1963
Ruth Geldart, B.A., in special studies (geography), 1964
Coldwell, Roy Michael, B.A., with Honours in geography, class II(ii), 1963
Cole, Winifred Valerie, B.Sc., with Honours in chemistry, class II(i), 1963
Colebourne, Neville, B.Sc., with Honours in chemistry, class I, 1958; Ph.D., 1961
Colebrook, Colin Francis, B.Sc., with Honours in general studies, class III, 1964
Coleman, Bernard Sinclair, M.B., Ch.B., 1961
David Alan George, B.Sc., with Honours in leather science, class II(ii), 1963
Raymond, B.Sc, with Honours in zoology, class I, 1964
Rodney, B.Sc., with Honours in mathematics, class I, 1964
Coles, Jacqueline, B.A., with Honours in Russian, class III, 1963
Colgrove, Richard, B.Sc., 1961
Collett, Arthur Richard, B.A., with Honours in Spanish, class II(i), 1962

Collicott, Sylvia Linda, B.A., with Honours in history, class II(ii), 1964
Collie, David, B.Sc., with Honours in mining, class II(ii), 1962
Collier, Brian, B.Sc., with Honours in pharmacy, class II(i), 1961; with Honours in pharmacology, class II(ii), 1962
John, B.Sc., 1962
Collinge, Edward Rodney, B.Sc., with Honours in chemistry, class III, 1962
Collings, Barry Cameron, B.Sc., with Honours in civil engineering, class II(ii), 1963
Collingwood, Gerard Anthony, M.B., Ch.B., 1960
Collins, Anthony Robin, B.Sc., with Honours in general studies, class I, 1962
Brian John, B.Sc., with Honours in mechanical engineering, class III, 1961
Christopher John, B.Sc., with Honours in chemistry, class III, 1963
Elizabeth Anne, B.A., with Honours in sociology and philosophy, class III, 1961
John Desmond, Ph.D., 1962
Michael John, B.A., with Honours in French, class II(i), 1962
Roger Gilbert, B.Sc., with Honours in chemistry, class II(i), 1962
Collinson, Eon Robert, B.Sc., with Honours in civil engineering, class III, 1964
Colwell, Keith Hall, B.Sc., with Honours in chemistry, class II(ii), 1960; M.Sc., 1963
Comer, John Henry, B.A., with Honours in English and music, class II(i), 1964
Comerford, David Graham, M.B., Ch.B., 1962
Comley, Thomas Hedges, B.A., with Honours in general studies, class II(ii), 1962
Coney, Richard Dudley, B.Sc., with Honours in mechanical engineering, class III, 1963
Conkey, Christopher Robert, B.Sc., with Honours in civil engineering, class II(i), 1964
Conlay, Jennifer Jane (Mrs. Canva), Ph.D., 1962
Connolly, Martin Kevin, B.A., with Honours in geography, class II(ii), 1963
Connor, Pauline Anne, B.A., with Honours in general studies, class III, 1961
Considine, Breda, B.A., with Honours in English, class II(i), 1962
Conway, Michael O'Neil, B.A., with Honours in general studies, class II(ii), 1964
Cook, David, B.A., with Honours in general studies, class II(ii), 1961
Jessie Ellen, B.A., with Honours in English, class III, 1963
Michael John, B.A., with Honours in general studies, class II(ii), 1961
Susan Constance, B.Sc., with Honours in zoology, class II(i), 1964
Thomas Neil, B.Sc., with Honours in chemical engineering, class II(ii), 1962
William Kilpatrick Thomson, B.Sc., with Honours in biochemistry, class II(i), 1964
Cooke, Nigel, B.Sc., with Honours in civil engineering, class I, 1962
Peter Ashmore, B.Sc., in general studies, 1963
William, B.A., with Honours in English, class II(i), 1964
Cookson, David Edward, B.A., with Honours in geography, class II(i), 1963
Roy Alfred, B.Sc., with Honours in mechanical engineering, class II, 1956; Ph.D., 1960
Timothy William, M.B., Ch.B., 1963
Coombes, Bronwen Ruth, B.A., with Honours in English and fine art, class II(ii), 1963
Coombs, Nigel John, B.Sc., with Honours in civil engineering, class II(ii), 1964
Cooper, Brian, B.A., with Honours in classics, class II(ii), 1964
David John, B.Sc., with Honours in agricultural studies, class II(ii), 1963
David Peill Wilson, B.A., with Honours in history, class II(i), 1963
David Raymond, B.Sc., with Honours in general studies, class III, 1964
Donald George, B.Sc., in special studies (mathematics), 1956; M.Sc., 1964
Frank Brian, B.Sc., with Honours in agricultural studies, class II(ii), 1963
Joyce Marian, B.A., with Honours in English, class II(ii), 1963
Keith Austin, B.Sc., with Honours in civil engineering, class I, 1963
Mrs. (see also Bothwell, Margaret Alison), M.A., 1961
Philip Gethin, B.Sc., with Honours in chemical engineering, class III, 1963
Ronald B.Sc., with Honours in chemistry, class II(i), 1957; Ph.D., 1960
Stephen Charles, B.A., with Honours in general studies, class II(ii), 1961
William, B.Sc., 1964
Cope, David Graham, B.Com., with Honours, class II(ii), 1963
Frank, Ph.D. (*in absentia*), 1961
Geoffrey Victor, B.Sc., 1964

Cope, Robert John, B.Sc., with Honours in civil engineering, class I, 1964
Copley, Malcolm, B.Sc., 1957; with Honours in textile industries, class II, 1958; Ph.D., 1961
Copp, David Alan, B.Sc., with Honours in civil engineering, class II(i), 1963
Corden, Christopher Hugh Holdsworth, B.Sc., with Honours in mining, class II, 1959; with Honours in mechanical engineering, class II(ii), 1960; Ph.D., 1964
Corlett, Helen Elizabeth, B.A., with Honours in sociology, class II(ii), 1961
James William, B.Sc., 1961
Cormack, Michael, B.Sc., with Honours in mathematics, class II(ii), 1963
Corngold, Marie Josephine, B.A., with Honours in French, class II(ii), 1962
Corvesor, Leo Francis, B.Sc., 1962
Cossar, Clive Douglas McIntosh, B.A., with Honours in German, class I, 1963
Cotran, Emile, B.Sc., 1961
Eugene, LL.B., with Honours, class II(i), 1958; LL.M. (*in absentia*), 1963
Cotterill, Jennifer Ann, B.A., with Honours in geography, class II(ii), 1964
Cotton, Ann Valerie, B.A., with Honours in music, class III, 1963
Roy Charles, M.B., Ch.B., 1955; M.D., 1962
Coupe, Barbara, B.A., with Honours in English and history, class II(ii), 1964
Collin, B.Sc., with Honours in chemistry, class III, 1964
Josephine Mary, B.A., with Honours in geography, class III, 1964
Couperthwaite, Walter John, B.Sc., with Honours in physics, class I, 1963
Court, Gordon, B.Sc., with Honours in biochemistry, class II(ii), 1963
Cousins, David, B.Sc., 1963
Coward, Malcolm Peech, Ph.D., 1961
Cowdrey, David Reginald, B.Sc., with Honours in physics, class II(ii), 1961
Cowles, Patricia Ann, B.Sc., with Honours in general studies, class II(ii), 1961
Cowley, Robert Lindley, B.Sc., with Honours in leather science, class III, 1964
Cowling, Peter George, B.A., with Honours in English, class II(i), 1961
Cowton, Douglas, B.Sc., with Honours in civil engineering, class III, 1962
Cox, Alan Peter, B.Sc., with Honours in general studies, class I, 1958; M.Sc., 1962
Alfred Brian, B.A., with Honours in history, class II(ii), 1962
Frank Dixon, B.A., with Honours in English, class II(ii), 1962
John Austin, B.Sc., 1962
Sydney Michael, B.Sc., with Honours in geography, class II(i), 1964
Coxon, Anthony Peter MacMillan, B.A., with Honours in sociology and philosophy, class II(i), 1961
Coyle, Peter James, Ph.D. (*in absentia*), 1963
Crabtree, Christopher John, LL.B., with Honours, class III, 1964
Peter Enos, B.Sc., with Honours in electrical engineering, class III, 1961
Sheila Ann, B.Sc., with Honours in general studies, class II(ii), 1962
Cran, John Nicholas, B.Ch.D., 1963
Crane, David Arthur, B.A., with Honours in economics, class II(ii), 1964
Peter Alexander, B.Sc., 1962
Crann, David, LL.B., with Honours, class II(i), 1964
Cranwell, Peter Aubrey, B.Sc., with Honours in chemistry, class I, 1960; Ph.D., 1963
Craven, Alan Frederick, B.Sc., in special studies (chemistry), 1963
Doreen Elizabeth, B.A., in special studies (Spanish), 1964
Gillian Mary, B.A., with Honours in general studies, class II(ii), 1963
John Stephen, B.Sc., with Honours in mechanical engineering, class II(ii), 1962
William Garth, B.A., with Honours in general studies, class III, 1961
Creak, George Alan, Ph.D., 1962
Creamer, Roy, B.A., with Honours in geography, class II(ii), 1964
Credland, John Dawson, B.Sc., with Honours in physics, class II(ii), 1964
Creedon, Sheila Mary, B.Ch.D., 1963
Crehan, Michael Patrick, B.Sc., with Honours in agricultural studies, class II(i), 1962
Creighton, Peter, B.Sc., with Honours in civil engineering, class II(i), 1962
Crew, Michael Derek, B.Sc., with Honours in general studies, class II(ii), 1962
Crichton, Geoffrey James, B.A., with Honours in economics, class III, 1964

Critchley, John Walter, B.Sc., with Honours in chemical engineering, class II(ii), 1964
Croft, Ian, B.Sc., 1961
Michael John, B.A., with Honours in geography, class II(i), 1959; M.A., 1961
Crompton, Christopher Samuel, B.Sc., 1964
David Brian, B.Sc., with Honours in chemistry, class III, 1964
Kenneth, B.Ch.D., 1962
Crosby, Neil Thomasson, B.Sc., with Honours in the chemistry of leather manufacture, class I, 1959; Ph.D., 1962
Cross, John Howard, B.Sc., in general studies, 1961
Crossley, John Raymond, LL.B., with Honours, class II(ii), 1962
Winifred Margaret, B.A., with Honours in French, class II(ii), 1963
Crouch, Patricia McCleery, B.Sc., with Honours in general studies, class III, 1962
Crowden, John Barry, B.Sc., with Honours in physics, class II(i), 1958; Ph.D., 1961
Crowther, Barrass Stockton, B.Com., 1961
Brenda, B.A., with Honours in geography and sociology, class II(ii), 1964
John Curtis, B.Sc., 1964
Michael Paul, B.Sc., with Honours in agricultural studies, class II(ii), 1962
Nigel Bolton, B.A., with Honours in classics, class II(i), 1963
Stephen, B.A., with Honours in English, class II(i), 1964
Cruickshanks, William, B.Sc., with Honours in mechanical engineering, class I, 1964
Crump, Malcolm John, B.A., with Honours in economics, class II(ii), 1963
Cryan, Peter John, B.Sc., with Honours in physics, class II(ii), 1964
Cuckson, Barbara Ann, B.A., with Honours in general studies, class II(ii), 1963
Cullen, Ann, B.A., with Honours in German, class II(ii), 1963
Cumming, Norman Hugh, B.Com., with Honours, class III, 1963
Cummings, Jenifer Winifred, B.A., with Honours in Spanish, class II(ii), 1963
Cunningham, Charles Anthony Hugh, B.Ch.D., 1961
David Andrew, B.Sc., with Honours in chemistry, class III, 1961
Curran, James Edward, B.Sc., with Honours in chemistry, class II(ii), 1961; M.Sc., 1963
Currie, Douglas James Newton, B.Sc., with Honours in civil engineering, class I, 1963
Duncan John, Ph.D. (*in absentia*), 1962
Sheila Campbell, B.Sc., with Honours in chemistry, class III, 1963
William Alan, B.Sc. (agricultural studies), 1962
Curry, Judith Mary, B.A., with Honours in Latin, class II(i), 1961
Curson, Robert John, B.Sc., with Honours in mechanical engineering, class III, 1964
Cusick, Allan Hodgson, B.Sc., with Honours in civil engineering, class II(ii), 1962
Cutler, David Frederick, B.Sc., with Honours in botany, class II(ii), 1961
Cutts, Brian Albert, B.Sc., with Honours in civil engineering, class II(ii), 1962
Cwik, Peter, B.Sc., 1964
Cyprus, Harry David, B.Sc., with Honours in chemical engineering, class II(i), 1962
Czene, Zoltan, B.Sc., 1962
Czerkawski, Julian Wladislaw, Ph.D., 1960
Czerski, Jan, B.Sc., with Honours in chemistry, class II(ii), 1963

Daglish, Neil Davidson, B.Sc., with Honours in general studies, class III, 1963
Dain, Lalage, B.Sc., with Honours in mathematics, class III, 1964
Dale, Ian Roger, B.A., with Honours in sociology, class III, 1963
Dalton, Peter Sim, B.Sc., with Honours in civil engineering, class III, 1964
Dalzell, Tom, B.Sc., with Honours in the chemistry of leather manufacture, class II, 1957; Ph.D., 1960
Dance, Gerald, B.A., with Honours in geography, class II(ii), 1962
Daniel, Carole Sandra, B.Sc., with Honours in general studies, class II(ii), 1964
Michael Roger, B.Sc., with Honours in physics, class II(i), 1959; Ph.D., 1962
William Anthony, LL.B., with Honours, class II(i), 1961
Daniels, Barrie, B.Sc., 1963
Brian Thomas, B.A., with Honours in economics, class III, 1963

Darby, Derek Richard, B.Sc., with Honours in chemistry, class III, 1962
Sybil, B.Sc., with Honours in geography, class III, 1961
Darling, Anthony Christopher, B.A., with Honours in philosophy and politics, class II(ii), 1964
Darlington, Mrs. Elizabeth, B.A., with Honours in theology, class II(i), 1962
Das Gupta, Nikhil Chandra, Ph.D., 1963
Dash, Barun Kumar, B.Sc., 1961
Dashper, John Colin, B.Sc., with Honours in mechanical engineering, class III, 1963
Davey, Frederick John, B.Sc., with Honours in physics, class II(ii), 1963
Hazel Rosina, B.A., with Honours in history, class II(ii), 1963
Julian Adrian Chaim, B.Sc., with Honours in ceramics, class II(ii), 1963
Davidson, Maureen Derry, B.A., with Honours in English and history, class III, 1964
Robert Stephen, Ph.D., 1961
Davies, Barry Camp, B.A., with Honours in geography, class II(ii), 1964
Barry William, B.Sc., in special studies (physics), 1962
Bernard Eric, B.Sc., with Honours in chemical engineering, class II(i), 1961
Carolyn, B.A., with Honours in general studies, class II(ii), 1961
Christopher Chapman, B.Sc., with Honours in physics, class II(ii), 1962
David Alan, Ph.D., 1961
Margaret Ethel, B.Sc., in special studies (chemistry), 1964
Margery Glover, B.Sc., with Honours in mathematics, class II(ii), 1962
Marilyn Nora, B.Sc., with Honours in general studies, class II(i), 1964
Noel, B.A., with Honours in history, class II(ii), 1963
Paul Suan, B.A., with Honours in general studies, class II(ii), 1964
Peter, B.Sc., with Honours in fuel science, class II(ii), 1963
Peter Alfred, LL.B., with Honours, class II(ii), 1964
Peter Quentin, B.A., with Honours in Russian, class II(ii), 1963
Richard Nicholas, B.A., with Honours in German, class II(ii), 1961
Robert Michael, B.Sc., with Honours in gas engineering, class II, 1959; Ph.D., 1962
Rosser Llewelyn, B.A., with Honours in geography, class II(i), 1962
Tegfryn, B.A., with Honours in sociology, class III, 1962
Davis, James Norman, B.Sc., with Honours in pharmacy, class II(ii), 1961
Davison, George Colin, B.A., with Honours in geography, class III, 1963
Kenneth, B.A., with Honours in French, class III, 1962
Tanya Rose, B.Sc., with Honours in physics, class II(ii), 1963
Davy, Patricia, B.Sc., with Honours in general studies, class II(i), 1963
Dawe, Alan Martin, B.A., with Honours in sociology, class II(i), 1962
Dawes, Edwin Alfred, B.Sc., with Honours in chemistry, class II, 1946; Ph.D., 1948; D.Sc., 1961
Paul Michael, B.Sc., with Honours in pharmacy, class II(i), 1963; with Honours in pharmacology, class II(i), 1964
Dawson, Alistair James, B.A., with Honours in economics, class II(i), 1962
Anthony, B.Sc., with Honours in pharmacy, class II(ii), 1962
Christine, B.A., with Honours in music, class II(ii), 1963
Colin Frederic, LL.B., with Honours, class II(ii), 1963
Graham Mitchell, B.Sc., with Honours in civil engineering, class III, 1962
John Barry, B.Sc., with Honours in geology, class I, 1957; Ph.D. (*in absentia*), 196
John Frederic, B.Sc., with Honours in colour chemistry, class II(i), 1961
Margaret Angela, B.A., with Honours in English, class II(i), 1964
Michael, B.A., with Honours in English, class II(ii), 1961
Myrtle Vera, B.A., with Honours in general studies, class II(ii), 1961
Peter John, B.Sc., with Honours in physics, class III, 1961
Thomas Michael, B.Sc., with Honours in chemistry, class II(i), 1963
Day, Gillian Margaret, B.Ch.D., 1962
Margaret Grace Copeland, B.A., with Honours in history, class II(ii), 1964
D'Cruz, Rosalind Annunciation, B.A., with Honours in history, class II(ii), 1963
Deakin, Mrs. Mavis, B.A., with Honours in English and history, class III, 1963
Peter Sam, B.A., with Honours in Russian, class II(i), 1963

Dean, Heather Lorraine, B.A., with Honours in textile design, class II(ii), 1963
Joan Lesley, B.A., with Honours in economics and history, class III, 1963
Kenneth Ian Dutfield, B.Sc., with Honours in mechanical engineering, class II(ii), 1964
Michael, B.Sc., with Honours in electrical engineering, class II(i), 1961
Dearden, Robert William, B.A., with Honours in sociology and philosophy, class II(ii), 1962
Dearing, Basil, LL.B., with Honours, class III, 1964
De Backer, Pierre, B.Sc., 1964
Debney, David William, B.A., with Honours in English, class II(i), 1962
De Courcey, Mary Teresa, M.B., Ch.B., 1964
Deeming, David Keith, B.Sc., with Honours in chemistry, class II(ii), 1964
Deery, Francis Cedric, B.Com., 1962
Dees, Catherine Vivien, B.Sc., in general studies, 1963
de Jong, Henri Antonie, M.Sc., 1962
Delves, Bryan, B.Sc., with Honours in chemistry, class II(ii), 1960
Dench, Valerie, B.A., with Honours in Russian, class II(ii), 1964
Denham, David, B.Sc., with Honours in physics, class II(i), 1957; Ph.D., 1960
Dennis, Brian Roy, B.Sc., with Honours in physics, class II(i), 1961
David Thomas, B.Sc., with Honours in botany, class I, 1959; Ph.D., 1962
Helen Marilyn, B.A., with Honours in English, class II(ii), 1962
Peter Patrick, B.Sc., with Honours in metallurgy, class III, 1961
Denton, Alec Thomas, B.Sc., 1964
Sheila Mary, B.A., with Honours in geography, class II(ii), 1961
Dervish, Mustafa Turgut, B.Sc. (agricultural studies), 1962
Desai, Devendrakumar Vaghajibhai, B.Sc., 1964
de Tute, Trevor Peter, B.Sc., with Honours in the chemistry of leather manufacture, class II(ii), 1962
Devereux, Kathleen Frances, M.A., 1963
De Vine, Marcelle Marie, B.A., with Honours in Spanish, class II(ii), 1963
Devlin, Terence Paul, B.A., with Honours in Latin, class III, 1963
Dewar, Alice Alston, B.Sc., with Honours in physics, class II(ii), 1962
de Wet, Petrus Johannes, Ph.D. (*in absentia*), 1961
Dewhirst, Jack, M.Sc., 1962
Dewhurst, Joseph Gordon, B.Sc., 1962
Thomas, B.Sc., with Honours in chemical engineering, class II(i), 1961
Thomas Antony, B.Sc., with Honours in agricultural studies, class II(i), 1961
Dexter, Richard William, B.Sc., with Honours in mechanical engineering, class III, 1964
Dhavale, Dattatraya Hari, M.Sc. (*in absentia*), 1963
Dhillon, Jogindar Singh, Ph.D. (*in absentia*), 1963
Dhuldhoya, Narayan Madhubhai, B.Sc., with Honours in chemistry, class III, 1959; Ph.D., 1962
Diamond, David John, B.A., in general studies, 1961
Dickinson, Michael, B.Sc., 1961
Michael Ridsdale, B.Sc., with Honours in general studies, class II(i), 1963
Dickson, John, B.Com., with Honours, class II(ii), 1964
Dimmock, David Charles, LL.B., with Honours, class II(i), 1961
Disney, John George, B.Sc., with Honours in zoology, class II(i), 1962
Divecha, Kirtikumar Jagmohandas, B.Sc., with Honours in colour chemistry, class III, 1963
Dixey, Marion Gladys, B.A., with Honours in biblical studies, class II(ii), 1961
Dixon, Christopher George Piers, B.Sc., with Honours in chemistry, class III, 1963
John Thornton, B.A., 1952; M.A., 1964
Kenneth William, B.A., with Honours in French, class II(ii), 1962
Maurice, B.Sc., with Honours in chemistry, class II(i), 1963
Michael Wakefield, B.A., with Honours in economics, class III, 1963
Peter, B.A., with Honours in geography and history, class II(ii), 1963
Rosemary Angela, B.Sc., with Honours in textile physics, class II(ii), 1961
William Alan, B.A., with Honours in English, class II(ii), 1961

Dobb, Michael George, B.Sc., with Honours in special studies (chemistry), class II(ii), 1959; Ph.D., 1963
Dobell, Anthony John, B.A., with Honours in economics, class III, 1962
Dobson, Brian Baillie, B.Com., with Honours, class II(i), 1964
Dodd, Peter Lawrence, B.A., with Honours in theology, class II(ii), 1961
Philip Kevin, LL.B., with Honours, class III, 1961
Dodgson, Alan, B.Sc., in special studies (chemistry), 1963
John Macleod, B.Sc., with Honours in geology, class II(ii), 1964
Dodsworth, Ian Charles, B.Sc., with Honours in colour chemistry, class II, 1958; M.Sc., 1962
Dodworth, Peter, B.Sc. in general studies (*in absentia*), 1962
Doerfler, Janet Brenda, B.A., with Honours in philosophy and English literature, class II(i), 1964
Peter Stanley, B.Sc., with Honours in mathematics, class II(ii), 1962
Dolan, Brian, B.A., with Honours in Spanish, class II(ii), 1964
Domaine, Sandra, B.Sc., 1963
Dominic, Christopher John, B.Sc., with Honours in chemistry, class II(i), 1962
Dongre, Arwind Vasant, M.Sc., 1960
Donnellan, John Francis, B.Sc., with Honours in biochemistry, class II(i), 1962
Donnelly, William Brian, B.Sc., with Honours in metallurgy, class III, 1963
Donner, Richard John, B.Com., with Honours, class II(i), 1961
Doran, John Anthony, B.A., with Honours in English and history, class II(ii), 1963
Dossor, John Haley, B.A., with Honours in economics and politics, class II(ii), 1962
Dottridge, Bridget, B.A., with Honours in sociology, class II(i), 1964
Doughty, Margaret Mary, B.Sc., with Honours in general studies, class III, 1961
Susan Joy, B.Sc., in general studies, 1961
Douglas, John Brian, B.A., with Honours in mathematics and philosophy, class II(ii), 1962
Peter Michael, B.Sc., with Honours in chemistry, class II(i), 1963
Sylvia Jacqueline, B.A., with Honours in modern languages, class II(ii), 1962
Dove, Colin Nigel, LL.B., with Honours, class III, 1962
Dowdall, Maureen Patricia, B.Sc., with Honours in general studies, class III, 1963
Monica Mary, B.Sc., with Honours in general studies, class II(ii), 1964
Dowell, Helen, B.Sc., with Honours in general studies, class III, 1964
Patricia Dorothy, B.A., with Honours in sociology and philosophy, class II(ii), 1964
Downes, John, B.Sc., 1963
Downs, Anne MacDonald, B.A., with Honours in Russian, class II(ii), 1963
Dowsey, Patrick Alan, B.A., with Honours in English, class II(ii), 1963
Doyle, James Vincent, B.Sc., 1963
Patricia Anne, M.B., Ch.B., 1964
Peter Hamlet, B.Sc., with Honours in chemistry, class II(ii), 1962
Drake, Deanna, B.A., in special studies (English), 1964
Mollie, B.A., with Honours in English, class III, 1962
Peter, B.Sc., 1963
Draycott, Richard James, B.Sc., with Honours in civil engineering, class II(ii), 1962
Dresler, Franklin Maurice, B.Ch.D., 1964
Dresser, Gordon Lloyd, B.Ch.D., 1963
Dring, Michael John, B.Sc., with Honours in chemical engineering, class II(ii), 1963
Driver, John Trevor, B.Ch.D., 1961
Dronfield, Philip Morris, B.A., with Honours in French, class III, 1964
Drummond, Annabell Dorothy, B.A., with Honours in French, class II(ii), 1963
Ducat, Doreen Ann, M.B., Ch.B., 1961
Duckworth, Brian Leslie, B.A., with Honours in economics, class III, 1962
Kenneth, B.Sc., with Honours in physics, class II(ii), 1960; Ph.D., 1964
Stanley, B.Sc., with Honours in chemistry, class II(i), 1954; Ph.D., 1962
Dudhia, Chandrakant Laxmanbhai, B.Sc., 1964
Dudleston, John Alan, B.Sc., in general studies, 1962
Dudley, Howard Tranter, B.Sc., in special studies (physics), 1964
Monica, B.A., with Honours in French, class II(ii), 1963

Duerden, Ian Joseph, B.Sc., with Honours in metallurgy, class II(i), 1962
Duffett, George Herbert Dudley, B.Sc., 1964
Dufton, Arnold Michael, M.B., Ch.B., 1961
Patricia Mary, B.A., in special studies (Spanish), 1964
Dugdale, Beatrice Margaret, B.A., with Honours in German, class II(ii), 1964
Brian, B.Sc., with Honours in physics, class II(ii), 1962
Duggleby, John Colin, Ph.D., 1962
Dukes, Michael, B.Sc., with Honours in chemistry, class I, 1964
Dunbar, Ian, B.Sc., with Honours in mining, class II(i), 1962
Duncan, Patricia, B.A., with Honours in English and history, class II(ii), 1964
Dunderdale, Lilian Mary Magdalen, B.Ch.D., 1961
Dunford, Donald Howard, B.Sc., with Honours in anatomy, class II(i), 1964
Gilbert, B.A., with Honours in geography, class I, 1962
Dunham, Patrick George, B.Sc., with Honours in chemical engineering, class II(i), 1960; Ph.D., 1963
Dunk, David, LL.B., with Honours, class II(ii), 1961
Dunleavy, Patrick Bryan, B.A., with Honours in French, class II(ii), 1963
Dunn, David Roger, B.Sc., with Honours in chemical engineering, class III, 1961
Dunsterville, Peter Francis, B.A., with Honours in geography, class III, 1962
Dupont, Maurice Roger, B.Sc., with Honours in mathematics, class III (*in absentia*), 1960
Durham, Esmé Vera, B.A., with Honours in history, class II(ii), 1961
John Charles, B.A., with Honours in French, class II(ii), 1964
Durling, Christopher John, B.A., in special studies (German), 1961
Dyer, Anthony Oswald, B.Sc., 1963
Brian Arthur, B.Sc., 1961
Michael Richard, B.Sc., with Honours in civil engineering, class I, 1964
Dykes, Brian, B.A., with Honours in general studies, class III, 1964
Dyson, Donald Philip, B.Ch.D., with Honours, class II, 1962
Frederick Malcolm, B.Sc., with Honours in civil engineering, class II(i), 1961
Ian Fraser, B.Sc., with Honours in chemistry, class II(i), 1960; Ph.D. (*in absentia*), 1964
Jeremy Bentley, M.B., Ch.B., 1961
Norman Haygarth, B.Sc., with Honours in chemistry, class II(i), 1959; Ph.D., 1962
Peter William, B.Sc., with Honours in agricultural studies, class II(i), 1962
Roger, LL.B., 1962
Walter Raymond, B.Sc., with Honours in colour chemistry, class II(i), 1961

Eagland, Michael Christopher, B.Ch.D., with Honours, class II, 1963
Early, Nigel Edward, M.B., Ch.B., 1962
Eason, John Keith, B.Sc., in general studies, 1964
East, Catherine, B.A., with Honours in English, class II(i), 1964
Eastburn, Melvyn Pickard, B.Sc., with Honours in general studies, class II(i), 1963
Eastham, David George, M.B., Ch.B., 1962
Thomas Malcolm, B.A., in special studies (history), 1961
Eastwood, David John, B.Sc., with Honours in civil engineering, class II(i), 1964
Patricia Eileen, B.A., with Honours in history, class III, 1963
Eaton, Anthony Charles, B.A., with Honours in general studies, class III, 1961
Dorothy Mary, M.B., Ch.B., 1960
Eric Charles, M.Sc., 1963
Stuart Howard, B.Sc., with Honours in physics, class III, 1962
Eccles, John James, B.Sc. (agricultural studies), 1961
Patricia Anne, B.Sc., with Honours in geography, class III, 1963
Economou, Jillian Louise, M.B., Ch.B., 1963
Edmonds, Anthony Charles Foster, B.Sc., with Honours in chemistry, class II(ii), 1962
Edmondson, Peter Wilson, B.A., with Honours in geography, class II(ii), 1963
Edmonson, Harry, B.Sc., with Honours in gas engineering, class II, 1958; Ph.D., 1961

Edwards, Gillian Mary Hunter, B.Sc., with Honours in zoology, class II(ii), 1962
Graham, B.A., with Honours in philosophy and history, class II(ii), 1962
James Kenneth, B.A., with Honours in geography and economics, class II, 1948; Ph.D., 1963
James Martin, B.Sc., with Honours in mining, class I, 1962
John Heber, B.A., with Honours in French, class III, 1962
John Ian, B.Sc., with Honours in metallurgy, class II(ii), 1964
John Oliver, B.Sc., with Honours in general studies, class II(i), 1964
Laurence Brunton, B.Sc., 1963
Mavis Irene, B.Sc., with Honours in physics, class II(i), 1961
Pamela Marjorie, B.A., with Honours in English and history, class II(ii), 1963
Richard Philip, B.Sc., with Honours in geology, class II(ii), 1962
Roger Milo, B.A., with Honours in philosophy and history, class I, 1963
Effiong, Charles Edet, M.B., Ch.B., 1963
Ehrlich, Roger David, B.Ch.D., 1961
Eisenthal, Mark Montague, LL.B., with Honours, class III, 1963
El-Ayouty, Amin Yassin Mohammad, Ph.D., 1964
El-Deiry, Magida Amin Youssif, B.A., with Honours in psychology, class II(ii), 1961
Elders, Derek, B.A., with Honours in English, class I, 1964
Elding, Beryl, B.A., with Honours in German, class III, 1962
El-Gharib, Mohey Eldin Abo Bakr Mussa, M.A., 1963
El-Guindy, Mohamed Mahmoud, Ph.D. (*in absentia*), 1963
El-Hassan, Shahir Ata, B.A., with Honours in general studies, class II(i), 1963
Ellam, John Stephen, B.Sc. (*aegrotat*), 1963
Richard Malcolm, B.Sc., with Honours in chemistry, class II(i), 1961
Ellar, David John, B.Sc., with Honours in general studies, class II(ii), 1963
Ellenport, Malcolm Ivan, B.A., with Honours in economics, class II(ii), 1961
Ellett, Brian George Stanley, B.Sc., with Honours in civil engineering, class II(i), 1962
Elliott, John, B.Sc., with Honours in colour chemistry, class I, 1959; Ph.D., 1962
Joseph, B.Ch.D., 1962
Sonia, B.Sc., 1964
Ellis, Catherine Ann, B.A., with Honours in music, class II(ii), 1963
David Alan, Ph.D., 1960
Franklyn, B.A., with Honours in history, class II(ii), 1962
Ellis, Jeffrey, M.B., Ch.B., 1961
John Kenneth Wardley, B.Sc., with Honours in chemical engineering, class III, 1964
John Patrick, B.Sc., 1964
Mary Christine, B.A., with Honours in general studies, class II(ii), 1963
Roger James, B.A., with Honours in English and history, class II(ii), 1964
Ellison, John Martin, M.B., Ch.B., 1963
William, B.A., with Honours in geography, class II(ii), 1964
Ellor, Albert John, B.Sc., in general studies, 1964
El-Mariah, Afaf Abd El-Rahman, M.Sc., 1961; Ph.D., 1964
Elmer, Christine, B.A., with Honours in sociology, class III, 1964
Elsdon, Ann, B.A., with Honours in English and history, class II(ii), 1963
Else, Roger Charles, B.Sc., with Honours in physics, class III, 1964
El-Sheikh, Riad Abdul-Hafiz Eweis, Ph.D., 1962
Elsley, Francis William Henry, Ph.D., 1961
Eltawil, Mohamed Ahmed, B.Sc., with Honours in the chemistry of leather manufacture, class III, 1962
Elver, Brian Harold, B.Sc., 1962
Elwell, Malcolm Garry, B.Sc., 1964
Ely, Colin Charles, B.Sc., with Honours in chemistry, class III, 1962
Emanuel, Hazel Marica, B.A., with Honours in general studies, class II(ii), 1963
Emes, Alan Victor, B.Sc., with Honours in biochemistry, class II(i), 1964
Emmott, Janet Irene, B.Sc., with Honours in botany, class II(i), 1960; Ph.D., 1963
Stephen Waddington, B.A., with Honours in textile design, class III, 1961
Emsley, James William, B.Sc., with Honours in chemistry, class II(i), 1956; Ph.D., 1960

Endersby, Malcolm Stanley, B.Sc., with Honours in civil engineering, class III, 1964
Eneremandu, James Wogu Samuel, M.A. (*in absentia*), 1961
Enfield, Roy Lawrence Andrew, B.A., with Honours in philosophy, class II(i), 1963
English, David John, B.A., with Honours in German, class II(i), 1962
Marion, B.A., with Honours in history, class II(ii), 1961
Entwistle, Sonia, B.A., with Honours in English, class II(ii), 1962
Ergin, Mehmet Abdullah Merih, B.Sc., with Honours in textile engineering, class II(i), 1961
Ergün, Turgut, B.Sc., 1963
Erim, Erol, M.Sc., 1962
Eskin, Sheila, B.Sc., with Honours in psychology, class II(ii), 1964
Evans, Alec Conrad, B.Sc., with Honours in physics, class II(ii), 1964
Anthony Charles, B.Sc., with Honours in chemical engineering, class II(i), 1961
Anthony John Robert, B.A., with Honours in French, class III, 1964
Barry Antony, B.A., with Honours in economics, class II(ii), 1961
Brenda Kathleen, M.B., Ch.B., 1963
Charles Christopher, LL.B., with Honours, class III, 1963
David John, B.Sc., with Honours in civil engineering, class II(i), 1963
David Patrick, B.Sc., with Honours in pharmacy, class II(ii), 1962
Doreen Margaret, B.Sc., with Honours in chemistry, class II(i), 1959; M.Sc., 1961
Edmund, B.Sc., 1962
Elizabeth Ann, B.A., with Honours in English and history, class II(i), 1964
Gwyneth Gladys, B.A., in general studies, 1962
Hugh Einydd, Ph.D., 1964
Hugh Warwick, B.Com., with Honours class II(ii), 1964
Ian William, B.A., with Honours in general studies, class III, 1963
Patricia Elizabeth, B.A., with Honours in history, class III, 1961
Rosemary Caroline, B.A., with Honours in Russian, class II(ii), 1962
Timothy Lloyd, B.Sc., 1961
Evason, Barrie, B.Sc., with Honours in physics, class II(ii), 1962
Everett, Alfred, LL.B., with Honours, class III, 1961
Anne Rosemary, B.A., with Honours in English, class II(i), 1962
Everitt, William Howard, B.Sc., with Honours in mechanical engineering, class II (i), 1961

Fackrell, Joan Margaret Hodel, B.A., with Honours in English, class II(ii), 1961
Fairbank, Frances, B.Sc., in special studies (chemistry), 1964
Fairbanks, Bruce Gerard, B.Sc., 1962
Fairbrother, Margaret, B.Sc., with Honours in chemistry, class II(ii), 1963
Fairclough, Edward, B.Sc., with Honours in mathematics, class II(i), 1964
Paul, B.Sc., with Honours in chemical engineering, class III, 1963
Fairfoul, Peter, B.Sc., with Honours in electrical engineering, class III, 1961
Fairfoull, Colin, LL.B., with Honours, class II(ii), 1962
Fairs, Elizabeth Anne, B.Sc., 1964
Fakayode, Joseph Abiola, B.A., with Honours in philosophy and politics, class II(ii), 1961
Falkingham, Richard, B.Sc., with Honours in general studies, class II(ii), 1963
Faller, Angela Mary, B.Sc., with Honours in physics, class II(i), 1961
Fancourt, William George, B.Sc., with Honours in mechanical engineering, class III, 1962
Faridany, Farzin, LL.B., with Honours, class III, 1963
Farnham, Jill, B.A., with Honours in history, class II(ii), 1964
Farnsworth, Humphrey Windsor, B.Sc., with Honours in civil engineering, class III, 1964
Farrar, Brian Stewart, B.Sc., with Honours in geography, class II(ii), 1964
Farrell, Bernard, B.Sc., with Honours in general studies, class III, 1961
Trevor, B.Sc., with Honours in physics, class I, 1964
Farrington, Kay, B.Sc., with Honours in general studies, class III, 1963
Farrow, Edith, B.A., with Honours in history, class II(ii), 1961
Fatkin, Gordon, B.Sc., with Honours in mining, class II, 1958; Ph.D., 1961
Faubert, Julien, B.A., with Honours in general studies, class II(ii), 1961

Faulkner, John, B.Sc., 1964
Valerie Ruth, B.A., with Honours in sociology, class III, 1962
Faure, Michael, B.A., with Honours in philosophy and history, class II(ii), 1961
Fawcett, Allan, B.Sc., with Honours in civil engineering, class II, 1957; Ph.D., 1961
Peter, B.Sc., 1952; with general Honours, class III, 1953; M.Sc., 1961
Feare, Christopher John, B,Sc., with Honours in general studies, class II(i), 1964
Fearn, Kathleen Mary, M.B., Ch.B., 1960
Fearon, Frederick William Gordon, B.Sc., with Honours in chemistry, class II(i), 1961
John Michael, B.Sc., in general studies, 1955; M.Sc., 1964
Featherstone, Michael John, B.Sc., with Honours in civil engineering, class III, 1961
Feldman, Elaine Barbara, B.A., with Honours in economics, class III, 1961
Feltrup, George Anthony, B.A., with Honours in economics, class II(ii), 1964
Fennessy, Maria, B.A., with Honours in English and history, class III, 1963
Fenton, John, M.B., Ch.B., 1963
Ferguson, Gordon William Hugh, LL.B., 1961
Ian Douglas Baty, B.A., with Honours in English, class II(ii), 1964
Valerie Ann, B.Sc., with Honours in general studies, class II(ii), 1963
Fergusson, James Christopher, B.Sc., with Honours in civil engineering, class III, 1963
Fernandez, Ronald Herbert Peter, M.B., Ch.B., 1946; M.D., 1960
Fernley, Lorna, B.Ch.D., 1963
Field, Colin, B.Sc., with general Honours, class II, 1952; M.Ed., 1964
Fielden, Timothy Haigh, B.Sc., with Honours in civil engineering, class III, 1963
Fieldhouse, Peter, B.Sc., with Honours in physics, class II(i), 1955; Ph.D., 1964
Fielding, Peter James, B.Com., with Honours, class II(ii), 1963
Finch, Alma Eileen, B.A., with Honours in music, class III, 1963
Melvyn, B.Sc., with Honours in chemistry, class II(ii), 1963
Trevor David Allen, B.Sc., 1964
Fincham, Alan Goldworth, B.Sc., with Honours in general studies, class III, 1959; M.Sc., 1961
Phillip Conway, B.Sc., with Honours in electrical engineering, class II(i), 1962
Findon, Edith Cherry, B.A., with Honours in history, class II(i), 1964
Finer, Julia Winifred, B.A., with Honours in English, class II(i), 1961
Finn, Courtney, B.A., with Honours in economics, class III, 1963
Finnigan, Calvin Dudley, B.A., in special studies (economics), 1961
Firbank, Wendy June, B.A., with Honours in English, class III, 1963
Firth, Lewis Arthur, B.Sc., with Honours in physics, class II(ii), 1961
Richard, B.A., in special studies (theology), 1964
Fisher, Anne Margaret, B.Sc., with Honours in electrical engineering, class II(ii), 1963
Derek George, B.Sc., with Honours in chemistry, class II(ii), 1956; Ph.D., 1961
Sally, B.A., with Honours in modern languages, class II(i), 1963
Fitches, Gordon William, B.Sc., 1961
Fitton, John Maxwell, B.Sc., 1962
Fitzgerald-Hart, Richard Michael, LL.B., with Honours, class III, 1964
Fitzpatrick, Kevin Brian, B.A., with Honours in Russian, class II(ii), 1964
Stephen Joseph, B.Sc., 1962
Flack, Ian William, B.Sc., 1963
John Robert, B.A, with Honours in general studies, class II(ii), 1964
Flacks, Louis Michael, M.B., Ch.B., 1962
Flaks, Bojan, B.Sc., with Honours in agricultural chemistry, class III, 1964
Flashtig, Paula Day, B.A., with Honours in sociology, class II(ii), 1961
Fleming, Helene, B.A., with Honours in English, class II(ii), 1964
Michael Edward, B.Sc., with Honours in civil engineering, class II(i), 1964
Peter William, B.A., with Honours in geography, class II(ii), 1962
Flesher, Peter, M.Sc., 1963
Fletcher, David Roy, B.A., with Honours in philosophy and English literature, class II(i), 1963
Geoffrey Walter, LL.B., with Honours, class II(i), 1964
George Edward, B.Sc., 1963

Fletcher, James Michael, B.Ch.D., 1960
Judith, B.A., with Honours in English, class II(i), 1962
Margaret Elisabeth, LL.B., with Honours, class II(i), 1961
Michael John, B.Sc., with Honours in metallurgy, class II(i), 1961
Peter Vincent, B.A., with Honours in English, class II(i), 1963
Raymond Arthur, B.Sc., with Honours in agricultural chemistry, class II(ii), 1961
Robert Frederick, B.A., with Honours in economics, class II(ii), 1963
Robin, B.Sc., with Honours in physics, class I, 1963
Roger, Ph.D., 1963
Flood, John Martin, B.Sc., with Honours in physics, class I, 1961
Flower, Janet Elizabeth, B.A., with Honours in French, class II(i), 1963
Noel Edward, B.Sc., with Honours in general studies, class II(i), 1962
Flynn, Anna Therese, B.Sc., in special studies (physics), 1963
Foggon, Ruth, B.Sc., with Honours in agricultural chemistry (*aegrotat*), 1962
Foner, Mrs. Judy, B.A., with Honours in general studies, class II(ii), 1962
Foot, Nigel Ian Stevens, B.Sc., with Honours in civil engineering, class III, 1963
Ford, Arnold Robert, B.Sc., 1961
George Barrie Cheetham, B.Ch.D., 1964
Foreman, John, B.Sc., with Honours in chemical engineering, class II(ii), 1961
Margaret Marion, B.Sc., with Honours in general studies, class II(ii) (*in absentia*), 1961
Forrest, Jennifer Hilary, B.A., with Honours in history, class II(ii), 1964
Martin St. John, B.A., with Honours in classics, class II(i), 1962
Forshaw, Joan, B.A., with Honours in geography and history, class III, 1964
Forster, Gordon, B.Sc., 1962
John Kendal, B.Com., with Honours, class III, 1963
Rita Carol, B.A., with Honours in geography, class II(ii), 1962
Fortnam, Alfred John, B.Sc., in special studies (chemistry), 1963
Fosbuary, David Frank, B.A., with Honours in philosophy and history, class III, 1963
Foss, Alan, B.Sc., with Honours in electrical engineering, class II(ii), 1962
Foster, Brian William, B.Sc., with Honours in textile chemistry, class II(ii), 1962
David, B.A., with Honours in geography, class III, 1963
Harry, B.Sc., 1964
John Russell, B.A., with Honours in geography, class II(ii), 1962
John Stuart, B.A., with Honours in German, class II(ii), 1961
Nicholas John, B.A., with Honours in economics, class II(ii), 1962
Ralph Cedric, B.Sc., with Honours in botany, class I, 1959; Ph.D., 1962
William, B.Sc., 1964
Fotheringhame, Alan Lynton, B.A., with Honours in history, class II(ii), 1961
Foulds, Beryl, B.Sc., with Honours in general studies, class II(i), 1964
Roger Arthur Frederick, B.Sc., 1962
Foulger, Lawrence Ernest, B.A., with Honours in German, class I, 1962
Foulston, Michael John, B.Sc., with Honours in chemistry, class III, 1962
Fountain, John Barringham, B.Sc., with Honours in mathematics, class II(i), 1962
Fowler, Kenneth Alan, B.A., with Honours in history, class II(i), 1955; Ph.D., 1962
Fox, Andrew Michael, B.A., with Honours in geography, class II(ii), 1961
Brian Robert, B.Sc., with Honours in general studies, class II(ii), 1961
Ernest Malcolm, M.B., Ch.B., 1964
John Leslie, B.Sc., with Honours in mechanical engineering, class III, 1961
Peter Thomas, M.B., Ch.B., 1962
Stephen, B.Sc., 1962
Trevor Stephen, B.Ch.D., 1964
Vincent Bede, B.A., with Honours in general studies, class III, 1961
France, Audrey, B.A., with Honours in sociology, class II(ii), 1964
Cedric James, M.B., Ch.B., 1963
David John, LL.B., with Honours, class III, 1961
John Campbell, B.Sc., with Honours in textile industries, class II(i), 1962
Francis, Andrea Rosheen, B.A., with Honours in sociology, class III, 1961

Francis, Jill Rosemary, B.A., with Honours in French, class III, 1964
Frank, Floyd, Ph.D. (*in absentia*), 1961
Peter John, B.A., with Honours in Russian, class II(i), 1963
Thomas Frederick Philip, B.Sc., with Honours in physics, class II(ii), 1961
Franklin, John Francis, B.Sc., with Honours in chemical engineering, class II(i), 1961
Fraser, Deidre Dawn, B.A., with Honours in sociology, class II(ii), 1964
Derek, B.A., with Honours in history, class II(i), 1961; M.A., with distinction, 1962
Janet Louise, B.A., with Honours in combined studies, class II(i), 1961
Frayman, Marilyn, B.A., with Honours in sociology, class III, 1963
Free, John Stuart, B.Sc., with Honours in physics, class III, 1963
Freebury, Cynthia Mary, B.A., with Honours in textile design, class II(ii), 1962
Freeman, Margaret, B.A., with Honours in sociology, class II(ii), 1963
Michael John, B.A., with Honours in French, class I, 1964
William, B.Sc., with Honours in physics, class III, 1964
Freer, Christopher Robert, B.Sc., with Honours in chemistry, class III, 1964
David Harrison, B.Sc., in general studies, 1961
French, John Francis, B.A., with Honours in English, class III, 1961
Raymond James, B.A., with Honours in general studies, class II(ii), 1961
Friedlander, Mrs. Romola, B.A., in special studies (German), 1962
Friel, Michael John, LL.B., with Honours, class II(ii), 1964
Frith, Norman, B.Sc., with Honours in general studies, class II(ii), 1961
Frizell, Richard Ernest Bruce, B.A., with Honours in English, class II(ii), 1964
Frost, Judith Ann, B.Sc., with Honours in mathematics, class II(ii), 1961
Lloyd Andrew, M.B., Ch.B., 1963
Malcolm William, B.Sc., in special studies (mathematics), 1961
Fryer, Alan, B.A., with Honours in Italian, class I, 1964
George Michael, B.Sc., with Honours in physics, class II(ii), 1959; M.Sc., 1961
Margaret, B.A., with Honours in general studies, class II(i), 1963
Sheila Mary, B.A., with Honours in English, class II(ii), 1964
Stuart Edwin, B.Sc., 1964
Fudge, Valerie Yvonne, B.A., with Honours in general studies, class III, 1961
Fuller, Janet Florence, LL.B., with Honours, class I, 1961
Furlong, Monica Winefride, M.B., Ch.B., 1963
Furner, Anthony, B.Sc., 1964
Furness, Ruth Margaret Bolinbroke, M.B., Ch.B., 1962
Furnivall, Anne, B.A., with Honours in history, class II(ii), 1961
Fussey, Ivor Frederick, M.B., Ch.B., 1962
Futcher, David Anthony, B.Sc., with Honours in chemistry, class III, 1961

Gadhok, Amrit Pal, B.Com., with Honours, class II(ii), 1962
Gadie, John Anthony, B.Sc., 1961
Gadre, Atulchandra Hari, Ph.D. (*in absentia*), 1961
Gaffin, Paula Tillie, LL.B., with Honours, class II(ii), 1963
Gaiger, Peter John, B.Sc., with Honours in zoology, class II(ii), 1964
Gale, Norman Eric, Ph.D., 1963
Gallagher, John Stuart, B.Sc., with Honours in civil engineering, class II(ii), 1963
Gallard, Jacqueline Georgette, B.A., with Honours in mathematics, class III, 1961
Gallemore, Ian Michael, B.Sc., with Honours in mechanical engineering, class II(ii), 1962
Galvin, Jane Stanton, B.A., with Honours in English, class III, 1964
Gambles, Sheila, B.A., in special studies (Latin), 1961
Gangat, Mohamed Ebrahim, B.A., with Honours in general studies, class III, 1963
Gannicott, Ian Robert, LL.B., with Honours, class II(i), 1962
Gardiner, Jennifer Hurlston, LL.B., with Honours, class III, 1963
Gardner, Michael John, B.Sc., with Honours in civil engineering, class II(ii), 1962
Gargett, Thomas, B.Sc., with Honours in civil engineering, class II(ii), 1962
Garman, Robert William Harry, B.Sc., 1961

## G

Garner, Diana Sylvia Ada, LL.B., with Honours, class III, 1962
Joseph Lancelot, B.Sc., in general studies, 1962
Garnett, Susan Mary, B.Com., with Honours, class III, 1963
Garratt, Charles Donald Frederick, B.A., with Honours in French and Latin, class II(ii), 1962
Garrett, Peter Robert, B.Sc., in special studies (chemistry), 1964
Garside, Barbara Ann, B.A., with Honours in geography and history, class II(ii), 1964
Garson, Magnus Sinclair, Ph.D. (*in absentia*), 1961
Gaskarth, Joseph William, B.Sc., with Honours in geology, class II(i), 1962
Gaskin, Robin Peter, B.Sc., with Honours in chemical engineering, class III, 1962
Gass, Ian Graham, B.Sc., with Honours in geology, class II, 1952; M.Sc. (*in absentia*), 1956; Ph.D., 1960
Gates, Robert John, B.A., with Honours in English, class II(ii), 1963
Gatward, Albert Peter John, B.Sc., with Honours in chemical engineering, class III, 1963
Gaunt, Martin, B.A., with Honours in textile design, class I, 1962
Patricia Mary, B.A., with Honours in English and history, class II(ii), 1964
Gaut, Richard John, B.Sc., 1963
Gavin, Kathleen Maria, B.Sc., with Honours in mathematics, class II(ii), 1964
Gay, Alan Leon, M.B., Ch.B., 1962
Gazard, Andrew David, B.Sc., with Honours in chemistry, class II(i), 1961
Geary, Philip John, B.Sc., with Honours in biochemistry, class I, 1964
Gee, Derrick William, B.Sc., with Honours in agricultural studies, class II(ii), 1963
John Charles, B.Sc., with Honours in chemical engineering, class II(i), 1964
Geere, Ian Wilfred, M.B., Ch.B., 1960
Gelder, Richard, B.Sc., in special studies (chemistry), 1964
Gellatly, David Creighton, Ph.D. (*in absentia*), 1964
Gelsthorpe, John Richard, B.Sc., with Honours in chemistry, class III, 1964
Gent, Alan Edward, B.Sc., with Honours in chemical engineering, class II(ii), 1963
Eric John, B.A., with Honours in geography, class II(ii), 1961
Robin Trevor Stuart, B.Sc., 1962
Gentles, William Norman, B.Sc., 1962
Gerrard, Patricia Winifred, B.A., with Honours in English, class II(ii), 1961
Ghosh, Sushil Kumar, B.Sc., 1960; with Honours in mining, class II(i), 1961; Ph.D., 1963
Gibbins, Allison, B.A., with Honours in English, class III, 1962
Brian, B.Sc., with Honours in civil engineering, class II(ii), 1964
Gibbon, David Percival, B.Sc., with Honours in agricultural studies, class II(i), 1963
Gibbs, Anne Rosemary, M.Sc., 1963
Diana Joan, B.A., with Honours in French, class II(i), 1964
Gibson, David Thomas, B.Sc., with Honours in biochemistry, class I, 1961
John, B.A., with Honours in English, class II(ii), 1964
Gifford, Margaret Ruth, B.A., with Honours in French, class II(ii), 1964
Gilbert, Anne, B.A., with Honours in French, class II(ii), 1961
Arthur Howard, B.Sc., with Honours in chemistry, class II(i), 1957; Ph.D., 1963
Peter Norval, B.Ch.D., 1961
Gilboy, Walter Bernard, B.Sc., with Honours in physics, class II(ii), 1955; Ph.D., 1964
Gilchrist, Anne (Mrs. Manuell), B.Sc., 1964
Gilden, Alison Margaret, B.Sc., 1964
Gilding, James Peter, B.A., in special studies (sociology), 1964
Giles, James Albert George, B.Sc., 1963
Gill, Kathleen Mavis, B.Sc., with Honours in psychology, class III, 1964
Gillespie, Derrick John, B.Sc., with Honours in chemistry, class II(ii), 1962
Gillett, Gordon Maclaren, B.Sc., with Honours in mechanical engineering, class II(ii), 1963
Gillham, Ian Robert, B.A., with Honours in general studies, class II(i), 1961
Gillibrand, Ivan Maurice, B.Sc., with Honours in biochemistry, class II(ii), 1964
Gilliver, Christine, B.A., with Honours in music, class II(i), 1963
Gilmore, Eileen, B.Sc., with Honours in physics, class III, 1964
Girt, John Leonard, B.A., with Honours in geography, class II(i), 1964
Giwa-Osagie, Henrietta Eki, LL.B., with Honours, class III, 1964

Glassar, Terence Alan, B.A., with Honours in psychology and sociology, class III, 1964
Glauert, Jonathan Brandreth, B.A., with Honours in general studies, class II(i), 1964
Gleave, Angela Ruth, B.A., with Honours in French, class II(ii), 1963
Gledhill, Rosalind Mary, B.Sc., with Honours in anatomy, class I, 1962
Sheila Ann, B.A., with Honours in Latin with Greek, class II(ii), 1961
Glencross, Michael John, B.Sc., in general studies, 1961
Glossop, Rita, B.A., with Honours in economic history and geography, class II(ii), 1964
Glynn, John Peter, B.Sc., with Honours in biochemistry, class I, 1963
Gobrial, Nabil Rizk, Ph.D., 1964
Goddard, Keith Arthur, B.A., with Honours in French, class II(i), 1963
Godfrey, Cedric Stuart, B.Sc., with Honours in mining, class II(i), 1963
Verlie Margaret, B.A., with Honours in general studies, class II(ii), 1964
Goding, Montague Walter John, B.Sc., 1961
Godwin, John Peter, LL.B., with Honours, class II(ii), 1963
Goldie, Susan, B.Sc., 1963
Goldsack, Beryl, B.A., with Honours in English, class II(ii), 1962
Goldstone, Merton, B.Sc., with Honours in physics, class I, 1964
Goldthorpe, Ann Rachel, B.A., with Honours in French, class III, 1961
Michael Hugh, B.Sc., with Honours in mining, class III, 1963
Gomersal, Andrew, B.A., with Honours in geography and sociology, class III, 1964
Gomersall, Angela Ruth, B.A., with Honours in geography, class II(ii), 1961
Goodall, Brian William, LL.B., with Honours, class III, 1964
Jean Margaret, B.A., with Honours in general studies, class III, 1963
Keith, B.A., with Honours in Latin, class II(i), 1964
Goodburn, Gillian Margaret, B.Sc., with Honours in bacteriology, class II(i), 1958; Ph.D., 1963
John Raymond, B.A., with Honours in theology, class II(ii), 1962
Goodenough, Lionel John, B.Sc., with Honours in general studies, class I, 1961
Gooder, John Malcolm, B.A., with Honours in geography, class II(ii), 1964
Goodfield, Gwyneth June, Ph.D. (*in absentia*), 1961
Goodge, Michael John, B.Sc., with Honours in civil engineering, class II(ii), 1964
Goodier, Fred, B.Sc., with Honours in textile chemistry, class III, 1961; M.Sc., 1964
Gooding, Ian Eric, B.Sc., 1963
Goodwin, Clive Baxter, B.Sc., in general studies, 1962
Goodwyn, Eric William, B.A., with Honours in economics, class II(ii), 1962
Goodyear, Sheila Jane, B.A., in special studies (geography), 1964
Gorbutt, David Arthur, B.A., with Honours in sociology, class III, 1962
Gore, Michael Miles, B.Sc., with Honours in electrical engineering, class II, 1957; Ph.D., 1961
Stephen, B.A., with Honours in history, class II(i), 1962
Gostiller, Elsie Ann, B.A., with Honours in sociology, class II(ii), 1963
Goswami, Prasanna Kumar, Ph.D., 1963
Gotch, Robert Christopher, B.A., with Honours in classics, class II(ii), 1961
Gotham, John Douglas, B.Sc., 1962
Gott, Ian Wilson, B.Sc., with Honours in mechanical engineering, class II(ii), 1961
Ronald Hilton, B.A., with Honours in history, class II(ii), 1963
Goucher, Lydia Margaret, B.A., with Honours in theology, class II(ii), 1962
Gough, Cameron William, B.Sc., with Honours in chemistry, class II(ii), 1963
Stanley Thomas Derek, B.Sc., with Honours in chemistry, class II(i), 1960; Ph.D. (*in absentia*), 1963
Goulcher, Roy William, B.Sc., with Honours in chemical engineering, class II, 1953; Ph.D., 1960
Goulding, David Charles Nawton, B.Sc. (agricultural studies), 1961
Gow, Noel Furse, B.Com., 1961
Grace, John Dale, Ph.D. (*in absentia*), 1963
Gracie, Margaret, B.A., with Honours in sociology, class II(ii), 1963
Grady, Paul Thomas, B.A., with Honours in German, class III, 1964
Grafton, Elizabeth, B.A., with Honours in French, class II(ii), 1964

Grafton, Paul Marlowe, B.Sc., with Honours in textile engineering, class II(ii), 1961
Graham, Charles Michael, B.Sc., with Honours in agricultural studies, class II(i), 1962
Christopher, B.Sc., 1963
Desmond Francis, B.A., with Honours in English, class II(i), 1961
John Douglas, B.A., with Honours in German, class I, 1964
Leonard George, B.A., with Honours in English and music, class III, 1964
Malcolm, B.Sc., with Honours in chemistry, class II(ii), 1963
William, LL.B., with Honours, class III, 1961
Grahame, David Christopher, B.Sc., 1962; with Honours in mining, class II(ii), 1963
Grainger, Cecil Richard, M.B., Ch.B., 1963
John Malcolm, B.Sc., with Honours in civil engineering, class II(i), 1964
Grandison, Neil Ogilvie, B.Sc., 1963
Grange, Janet Elizabeth, B.Sc., with Honours in pharmacy, class II(i), 1963; with Honours in pharmacology, class II(i), 1964
Grant, Lawrence Alan, LL.B., with Honours, class II(i), 1963
Grantham, John William, B.A., with Honours in modern languages, class II(ii), 1962
Granville, Mary Catherine, B.A., with Honours in English and history, class II(ii), 1964
Graveson, Bruce, B.A., with Honours in Latin, class II(ii), 1962
Gray, Ann Valerie, B.A., with Honours in general studies, class II(ii), 1963
John Richard, B.A., 1941; M.A., 1962
John Stewart, B.Sc., with Honours in chemistry, class I, 1958; Ph.D., 1963
Patricia Anne, B.A., with Honours in philosophy and English literature, class III, 1964
Grayburn, Christine, B.Sc., 1964
Greaves, Brian, B.A., with Honours in geography, class I, 1955; M.A., 1961
Colin Robert, B.Sc., 1962
Janet Elizabeth, B.A., with Honours in sociology, class II(ii), 1962
John Wesern, B.Sc., with Honours in chemical engineering, class II(ii), 1962
Trevor, B.Sc., with Honours in mining, class III, 1962
Green, Brenda, B.Sc., with Honours in mathematics, class III, 1963
Brian, B.Sc., 1961
Christopher John Charles, B.A., with Honours in psychology and sociology, class II(ii), 1964
Colin Paul, B.Sc., with Honours in chemistry, class II(ii), 1961
Edward John, B.Sc., 1961
Gerald, B.Sc., 1963
Howard Stanton, B.Sc., with Honours in colour chemistry, class II(i), 1961
John, B.A., with Honours in economics, class II(ii), 1961
John Christopher, B.Sc., with Honours in botany, class II(i), 1962
Michael Alan, M.B., Ch.B., 1962
Peter Eric, B.Sc., with Honours in electrical engineering, class II(i), 1963
Robin Christopher William, B.A., with Honours in English and fine art, class II(i), 1964
Greenald, Ernest Brian, B.Sc., 1963
Greene, Terry, B.A., with Honours in general studies, class II(ii), 1961
Greenfield, Bruce Stephen, B.A., with Honours in modern languages, class II(i), 1962
David John, B.Sc., 1964
Greenwood, Angela Mary, B.Sc., with Honours in chemistry, class II(ii), 1962
Barry David, B.Sc., with Honours in textile chemistry, class III, 1962
Delia, B.A., with Honours in French, class II(ii), 1964
Mrs. June Anne, B.A., in special studies (sociology), 1963
Mary Elizabeth, B.A., with Honours in psychology, class II(i), 1961
Peter, B.Sc., with Honours in agriculture, class II(ii), 1964
Roger David, B.Sc. (*aegrotat*), 1961
Roger Kearsley, B.Sc., with Honours in metallurgy, class II(ii), 1962
Valerie Patricia, B.A., with Honours in psychology and sociology, class II(i), 1963
Greetham, John Wordsworth, LL.B., with Honours, class II(ii), 1963
Gregory, Anthony Hamilton, LL.B., with Honours, class II(i), 1964

Gregory, Douglas Stuart, B.Sc., 1961
Irene Rayner, M.B., Ch.B., 1963
James Bromage, B.Sc., with Honours in metallurgy, class III, 1963
Philip Howard, B.A., with Honours in geography, class II(ii), 1964
William Keith, B.Sc., with Honours in physics, class III, 1961
Gregson, Gail Jasmine Madeline, B.A., with Honours in German, class II(ii), 1963
John, B.Sc., with Honours in mechanical engineering, class II(ii), 1961
Greig, Eleanor Janet Mary, B.Sc., 1964
Gribbin, Timothy Albert, B.A., with Honours in French, class III, 1963
Grieve, David William, B.A., with Honours in economics, class II(ii), 1963
Pamela Helen, B.A., with Honours in English and fine art, class III, 1964
Griffith, Ronald Boyd, B.A., with Honours in economics, class III, 1963
Griffiths, Eric Wright, M.Ed., 1964
John Granville, B.Sc., with Honours in mathematics, class II(i), 1964
Robert Edward, B.Sc., with Honours in civil engineering, class III, 1964
Susan Gwynneth Vera, B.A., with Honours in general studies, class II(i), 1964
Grimes, Hazel Dorothy (Mrs. Haggith), B.Sc., with Honours in zoology, class II, 1952
Grimley, Charles Vincent, B.Sc., with Honours in mechanical engineering, class III, 1964
Grimshaw, Roy, B.Sc., with Honours in chemistry, class II(ii), 1961
Grist, Charles Nigel, B.A., with Honours in English, class II(ii), 1962
Michael William, B.Sc., with Honours in civil engineering, class II(i), 1963
Grosskopf, Deanna Janet, B.A., with Honours in sociology, class III, 1961
Grove, Peter Clayden, B.A., with Honours in geography, class II(i), 1961
Grubb, Ellen Joan, B.A. with Honours in general studies, class II(ii), 1962
Grundy, Malcolm Paul, B.Sc., 1962
Gubara, Ali Mohamed, B.Sc., 1963
Gudgeon, Alfred Brian, M.B., Ch.B., 1961
Guest, Geoffrey Henry, B.A., with Honours in sociology and philosophy, class II(ii) (*in absentia*), 1962
Julia Ann, B.A., with Honours in geography, class II(i), 1962
Guindi, Hoda Shaker, M.A., 1963
Nadia Shaker, M.A., 1962
Guirgis, Raafat Abou Sief, M.Sc., 1964
Guiton, Richard Alexander Derek, B.A., with Honours in history, class III, 1961
Gunn, William Albert, B.A., in special studies (German), 1961
Gunter, Richard Miles, B.Sc., 1962
Gutteridge, John Malcolm, B.Sc., with Honours in metallurgy, class II(ii), 1964

Hadath, Lorraine, B.A., with Honours in history, class II(ii), 1964
Haddon, Neil Andrew Charles, B.Sc., in special studies (biochemistry), 1963
Hadfield, George Michael, B.Sc., with Honours in chemical engineering, class III, 1962
John Barry, B.Sc., 1964
Hadlow, Deanna, B.A., with Honours in mathematics, class III, 1962
Hadwin, Leslie, B.Sc., with Honours in electrical engineering, class II(i), 1961
Hagger, Clifford Stuart Leyland, B.A., with Honours in English, class II(i), 1962; M.A., 1964
Haggith, Mrs. (see also Grimes, Hazel Dorothy), Ph.D., 1961
Haghigi, Salama Mostafa, B.Sc., with Honours in electrical engineering, class II(ii), 1964
Haigh, Brian Trevor, B.Sc., with Honours in mechanical engineering, class III, 1963
Gertrude Jennifer, B.A., with Honours in general studies, class I, 1960; M.A., 1963
John Desmond, B.A., with Honours in English, class I, 1949; M.A., 1950; Ph.D., 1963
John Matthews, B.Sc., with Honours in pharmacy, class III, 1963
John Michael, B.A., with Honours in geography, class II(ii), 1962
Rosalind, B.A., with Honours in general studies, class II(i), 1964
Sheila, M.B., Ch.B., 1963
Hailey, Stuart Ponder, B.Sc., with Honours in agriculture, class II(i), 1964

Hailstone, Roger, B.Sc., with Honours in chemical engineering, class I, 1958; Ph.D., 1961
Haines, Christine Mary, B.A., with Honours in Italian, class II(i), 1962
David Oxford, LL.B., with Honours, class III, 1961
Michael, B.Sc. (agricultural studies), 1962
Hainsworth, Frank, M.B., Ch.B., 1960
Roger, M.B., Ch.B., 1962
Timothy Bateson, B.Com., with Honours, class III, 1961
Hajee, Abu Bakr, M.B., Ch.B., 1963
Halford, Malcolm Niels Grovenor, M.B., Ch.B., 1963
Hall, Anthony Eric, B.Sc. (agricultural studies), 1961
David John, B.Sc., with Honours in civil engineering, class III, 1963
Derek, B.A., with Honours in economics, class III, 1961
Geoffrey, B.Sc., with Honours in mathematics, class II(i), 1963
Janet Susan, M.B., Ch.B., 1963
Mrs. Jean Margaret, B.A., in special studies (theology), 1963
Jillian, B.A., with Honours in general studies, class II(ii), 1962
Kathryn, B.Sc., in special studies (mathematics), 1962
Robert Ernest, B.Sc., with Honours in electrical engineering, class I, 1961
Robert Ian, B.Sc., with Honours in chemical engineering, class II(ii), 1964
Sarah Serena, LL.B., with Honours, class II(ii), 1963
Susan Mary, B.A., in combined studies (philosophy and English literature), 1963
Hallam, Michael James, B.A., with Honours in English, class III, 1963
Hallard, David, B.Com., with Honours, class II(ii), 1963
Hallsworth, Ernest Gordon, B.Sc., with Honours in agricultural chemistry, class I, 1936; Ph.D., 1939; D.Sc., 1964
Halton, David William, B.Sc., with Honours in general studies, class II(i), 1960; with Honours in zoology, class II(i), 1961
Hamadé, Adib Ramez, B.Sc., 1964
Hamburg, Stuart Alan, B.Ch.D., 1964
Hamilton, Ann Elizabeth, LL.B., with Honours, class II(i), 1964
David Patrick, B.Com. with Honours, class III, 1963
Mary Rose, B.Sc., with Honours in general studies, class I, 1964
Hamlett, Peter Russell, LL.B., with Honours, class II(i), 1964
Hamm, Stella Marilyn, B.Sc., with Honours in general studies, class II(i), 1962
Hammersley, Jeffrey, B.A., with Honours in French, class II(ii), 1962
Hammond, Angela Lesley, B.A., with Honours in sociology and philosophy, class III, 1961
Hampshire, Allan, B.Sc., with Honours in general studies, class II(ii), 1962
Hampson, Elizabeth Cordelea, B.A., with Honours in psychology, class II(i), 1961
Frank, B.Sc., with Honours in chemistry, class I, 1961
Hands, Samuel, B.A., with Honours in English, class II(i), 1964
Handscombe, Brenda, B.A., with Honours in English, class II(ii), 1961
Handy, Laurence James, B.A., with Honours in economics, class II(i), 1964
Hannaford, Colin Donald, B.Sc., with Honours in electrical engineering, class I, 1962
Hannam, Antony Rignall, B.Sc., with Honours in colour chemistry, class III, 1959; M.Sc., 1962
Patricia Ann (Mrs. Brewster), B.A., with Honours in English (*aegrotat*), 1963
Ruth, M.Ed., 1963
Hannesson, Jom Ingi Eldon, B.A., with Honours in general studies, class III, 1961
Hanson, Malcolm Gerald, B.A., with Honours in theology, class III, 1963
Harbron, Edwin, B.Sc., with Honours in chemistry, class II(i), 1958; Ph.D., 1961
Hardacre, Richard Charles, B.Sc., 1964
Hardey, Brian Richard, B.A., with Honours in general studies, class III, 1961
Harding, James Austin, B.A., with Honours in general studies, class II(ii), 1961
Priscilla Jane, B.A., with Honours in general studies, class III, 1961
Hardstaffe, Michael, B.A., with Honours in English, class II(ii), 1962
Hardwick, Thomas Russell, B.Sc., with Honours in civil engineering, class I, 1956; Ph.D., 1961
Hardy, Henry Charles, B.Sc., with Honours in chemistry, class II(i), 1964

Hardy, Margaret, B.Sc., with Honours in mathematics, class II(ii), 1962
Thomas Roy, B.A., with Honours in economics, class III, 1962
Hardyman, Malcolm John Charles, B.Sc., with Honours in colour chemistry, class III, 1963
Hargreave, Frederick Ernest, M.B., Ch.B., with Honours, class II, 1961
Hargreaves, Gordon, B.Sc., with Honours in electrical engineering, class II(i), 1961
Ian Walter, B.Sc., 1961
Roger Philip Nixon, B.Sc., with Honours in mining, class II(ii), 1961
Trevor, B.Sc., with Honours in colour chemistry, class II(i), 1961; M.Sc., 1964
Harkness, David Dalgleish, B.Sc., with Honours in colour chemistry, class II(ii), 1962
Peter Arnold, B.Sc., with Honours in colour chemistry, class II(ii), 1962
Harling, Peter, B.Sc., with Honours in mechanical engineering, class III, 1963
Harman, Christopher John, B.A., with Honours in sociology and philosophy, class II(i), 1964
Colin Victor, B.Sc., with Honours in physics, class II(i), 1964
Harmer, Peter David, B.A., with Honours in classics, class III, 1961
Harness, David, B.A., with Honours in geography, class II(ii), 1962
Harpham, Barry, B.Sc., with Honours in chemical engineering, class II(i), 1963
Harries, Malcolm Stuart, B.A., with Honours in sociology, class III, 1964
Harris, Angela Katherine, B.Ch.D., 1963
Anthony Laurence, B.Sc., 1964
Brenda Ann, B.A., with Honours in English and fine art, class II(i), 1963
Brian Thomas, B.Sc., with Honours in civil engineering, class II(ii), 1963
Mary Elizabeth Christine, B.A., with Honours in sociology, class II(ii), 1964
Paul Michael, B.Sc., with Honours in agricultural studies, class I, 1956; M.Sc., 1960
Stewart Edward, B.A., with Honours in Russian, class III, 1962
Harrison, Adrian Philip, M.B., Ch.B., 1964
Anthony Edward, B.A., with Honours in economics, class II(i), 1964
Craig, B.A., with Honours in English and fine art, class II(i), 1963
David Alan, B.Sc., in special studies (geography) (*in absentia*), 1961
David Blackburn, B.Sc., with Honours in physics, class III, 1964
Derrick, B.Sc., with Honours in geography, class II(ii), 1964
Deryk William, B.Sc., with Honours in chemistry, class III, 1960
Elisabeth Ann, B.A., with Honours in general studies, class II(ii), 1963
Ernest George, B.Sc., with Honours in civil engineering, class III, 1962
Ian Roland, B.Sc., in special studies (chemistry), 1964
Isobel, B.A., with Honours in history, class II(i), 1961
John Briscall, LL.B., with Honours, class II(ii), 1964
John Patrick, B.Sc., with Honours in physics, class II(i), 1961
John Russell, B.Sc., with Honours in agricultural studies, class II(ii), 1963
John Stuart, B.Sc., with Honours in gas engineering, class II(i), 1962
Kenneth, B.Sc., 1961
Kevin, B.Sc., with Honours in mechanical engineering, class II(ii), 1962
Malcolm Charles, Ph.D., (*in absentia*), 1962
Michael, B.Sc., with Honours in civil engineering, class II(i), 1962
Nigel, B.A., with Honours in geography, class II(ii), 1963
Harry, Arthur Alfred, M.Sc., 1962
Hart, David John, B.Sc., with Honours in chemical engineering, class II(i), 1962
Jill Christine, B.A., in general studies, 1963
Michael Stuart, B.A., with Honours in psychology and sociology, class II(ii), 1964
Roger, B.Sc., with Honours in general studies, class III, 1963
Hartigan, Anthony John, B.A., with Honours in general studies, class II(i), 1963
Hartill, Peter Thomas, B.A., with Honours in economics, class II(ii), 1964
Hartland, Ian William, B.Sc., with Honours in general studies, class III, 1961
Hartley, Edward Brian, B.Sc., 1960; with Honours in textile industries, class II(i), 1961
Noreen, B.A., with Honours in French, class II(ii), 1962
Patricia Ann, LL.B., with Honours, class III, 1962
Thomas Rex, B.Ch.D., 1962
Hartney, Thomas, B.A., with Honours in English, class II(ii), 1961

Hartshorne, William Park, B.A., with Honours in English, class III, 1961
Harvey, Hugh Michael, LL.B., with Honours, class II(i), 1961
Jean, B.A., with Honours in general studies, class II(ii), 1962
Judith Ceridwen Irangani, B.A., with Honours in sociology, class II(ii), 1964
Michael Gwydir Parsons, B.Sc., with Honours in zoology, class II(ii), 1961
Robert Christopher Martin, B.Sc., 1964
Stanley Joseph, B.Sc., with Honours in mechanical engineering, class II(i), 1961
Trevor James, B.Sc., with Honours in physics, class I, 1958; Ph.D., 1962
Harwood, Robert William, B.Sc., with Honours in metallurgy, class II(ii), 1962
Haryott, Richard Baskcomb, B.Sc., with Honours in civil engineering, class I, 1962
Haskew, Paul Joseph, B.Sc., with Honours in mechanical engineering, class III, 1961
Haskins, Michael Stuart, B.A., with Honours in political studies, class III, 1963
Hassall, Harold, B.Sc., with Honours in biochemistry, class II(i), 1958; Ph.D. (*in absentia*), 1961
Hatfield, Mary Everson, B.A., with Honours in modern languages, class II(ii), 1964
Hatton, Christopher John, B.Sc., with Honours in physics, class I, 1959; Ph.D., 1962
Haverly, Robert, B.A., with Honours in general studies, class II(ii), 1962
Haward, Andrew Martin, B.Sc., with Honours in chemistry, class III, 1964
Timothy Frank, B.Sc., with Honours in civil engineering, class II(i), 1964
Hawker, Michael Frederick, B.A., with Honours in sociology, class III, 1964
Hawley, Elizabeth Kathleen, B.A., with Honours in English, class II(ii), 1962
Haworth, Stephen Michael, M.B., Ch.B., 1960
Hawthorn, Jeremy Miles, B.A., with Honours in English, class II(i), 1964
Hazel, Roger Joseph, B.Sc., with Honours in metallurgy, class III, 1962
Hazell, Alan Charles, Ph.D., 1962
Hay, Peter John, B.Com., with Honours, class III, 1962
Hayes, Anthonia Beverley Vanda, B.Sc., with Honours in pharmacy, class II(ii), 1963
David, B.Sc., with Honours in physics, class II(ii), 1958; M.Sc., 1960
John Christopher, B.Sc., with Honours in civil engineering, class II(ii), 1963
John Richard Francis, B.Sc., with Honours in mechanical engineering, class II(i), 1964
Norma Elizabeth, B.A., with Honours in French, class II(ii), 1963
Haygarth, John Charles, B.Sc., with Honours in chemistry, class I, 1962
Hayhow, Ian Gerald, B.Sc., with Honours in civil engineering, class III, 1963
Hayman, David Stanley, B.Sc., with Honours in botany, class II(ii), 1961
Hayne, Michael Andrew, B.Ch.D., 1963
Haynes, Edward James Walter, B.A., with Honours in Spanish, class II(ii), 1961
Hayward, Patricia, B.A., with Honours in Russian, class II(ii), 1961
Shirley Ann, B.A., with Honours in modern languages, class III, 1961
Healy, John Joseph, B.A., with Honours in English, class II(i), 1962; M.A., 1964
Patricia Margaret, B.A., with Honours in German, class II(ii), 1963
Heap, Adrian James, M.B., Ch.B., 1963
Harvey, B.Sc., with Honours in general studies, class III, 1963
Heaps, Peter William, B.Sc., with Honours in the chemistry of leather manufacture, class II(i), 1961
Heath, Roger Edward Ogilvie, B.Sc., with Honours in gas engineering, class II(ii), 1963
Hebden, Michael John, B.Sc., with Honours in chemistry, class II(i), 1963
Hedworth, James, B.Sc., with Honours in metallurgy, class II(ii), 1964
Heggs, Peter John, B.Sc., with Honours in chemical engineering, class II(i), 1964
Helliwell, Annette, B.A., with Honours in English, class III, 1964
Colin Michael, B.Sc., with Honours in physics, class II(ii), 1963
Paul Richard, B.Sc., with Honours in civil engineering, class II, 1957; Ph.D., 1960
Hemingway, Allan, B.Sc., in special studies (mathematics), 1964
Ernest Bryan, B.Sc., with Honours in biochemistry, class II(ii), 1963
Hempsey, James Edmund, LL.B., with Honours, class II(ii), 1964
Henderson, Graham Terence, B.A., with Honours in French, class II(i), 1963
Harold Michael, Ph.D., 1963
John Robert, B.A., with Honours in German, class II(i), 1964

Henderson, Noel Gordon, B.A., with Honours in French, class II(ii), 1961
Peter, B.A., with Honours in geography, class III, 1963
Robert William, B.Sc., with Honours in the chemistry of leather manufacture, class II(ii), 1962
Sylvia Mary, B.A., with Honours in English, class II(i), 1963
Hendry, Elsa MacLean, B.A., with Honours in sociology, class II(ii), 1962
Henfrey, Keith, B.Sc., with Honours in civil engineering, class III, 1963
Henson, Peter William, M.Sc., 1961
Henstock, Mrs. Valerie, B.A., with Honours in Italian, class III, 1962
Henton, Jeffrey Ernest, B.Sc., with Honours in chemical engineering, class I, 1964
Hepplestone, Ian John, B.Sc., 1964
Heptinstall, Christopher Thomas Kay, B.Sc., with Honours in civil engineering, class II(ii), 1963
Hepworth, John Vord, Ph.D. (*in absentia*), 1962
Kenneth, Ph.D., 1961
Herbert, David, B.Sc., with Honours in physics, class II(ii), 1964
Malcolm Barry, B.A., with Honours in general studies, class II(ii), 1962
Richard Brian, Ph.D., 1963
Robin, B.Sc., with Honours in civil engineering, class II(i), 1962
Rodney Lloyd, M.B., Ch.B., 1963
Terence William, B.Sc., 1964
Herod, Alan Alfred, B.Sc., with Honours in chemistry, class II(ii), 1964
John David, B.Sc., with Honours in physics, class II(ii), 1964
Heron, Keith, B.Sc., with Honours in mechanical engineering, class II, 1959; Ph.D., 1962
Mrs. (see also Thexton, Mavis), M.A., 1962
Hervey, John Alexander, B.A., with Honours in German, class III, 1963
Hesketh, Norah Kathleen, B.A., with Honours in economics and history, class III, 1963
Heslop, Harold William, B.A., with Honours in modern languages, class II(i), 1962
Hesmondhalgh, James Anthony, LL.B., with Honours, class II(ii), 1964
Hester, Nigel William Scobie, M.B., Ch.B., 1964
Hetherington, David Robert, B.Sc., in general studies, 1963
Hewison, Edward, B.A., with Honours in music, class III, 1963
Hey, Christopher David, B.Sc., with Honours in the chemistry of leather manufacture, class II(i), 1962
Michael James, B.Sc., with Honours in chemistry, class I, 1961
Heym, Michael George Edward Richard Walter Harry, B.A., with Honours in sociology and philosophy, class II(i), 1964
Heywood, Graham Allen, B.Sc., 1963
Heyworth, Harry Lee, B.Sc., with Honours in general studies, class II(i), 1962
Hibbert, David John, B.Sc., with Honours in civil engineering, class II(ii), 1963
Hibbs, Jennifer Margaret, B.A., with Honours in general studies, class III, 1963
Hickman, Laurence Colin, B.Sc., with Honours in chemical engineering, class III, 1962
Hicks, Gertrude Angela, B.A., with Honours in English, class II(ii), 1963
Hide, Henry, B.Sc., with Honours in general studies, class I, 1962
Hider, Christine Margaret, B.Sc., with Honours in general studies, class III, 1964
Hiett, Donald William, B.A., with Honours in economics, class III, 1963
Higgins, Francis James, B.Sc., with Honours in physics, class II(ii), 1964
Higgs, David Grantley, B.Sc., with Honours in the chemistry of leather manufacture, class II(i), 1960; Ph.D., 1963
Higham, Norman, M.A., 1962
Hignett, Rosemary, B.A., with Honours in general studies, class II(i), 1962
Higo, Aigboje, M.A., 1962
Hilditch, Peter, B.A., with Honours in economics, class III, 1961
Hildreth, John David, B.Sc., with Honours in colour chemistry, class I, 1959; Ph.D., 1962
Hill, Andrew Brodie, B.A., with Honours in psychology, class II(i), 1961
David, B.A., with Honours in English, class II(ii), 1964
David Norman, B.A., in special studies (economics), 1962
Dilys Mary, B.A., with Honours in sociology, class II(i), 1962

Hill, Eric James, B.Sc., 1963
Garry, B.Sc., with Honours in mining, class II(i), 1963
Ian Rendel, B.Com., 1962
John Vernon, B.Sc., with Honours in textile industries, class II(ii), 1961
Leonard Frederick, M.B., Ch.B., 1963
Margaret, B.A., with Honours in music, class II(i), 1961; B.Mus., 1962
Raymond, B.A., with Honours in economics, class III, 1962
Robert Edward, B.Sc., with Honours in general studies, class II(i), 1964
Roland Leslie, B.Sc., with Honours in chemistry, class III, 1963
Sonia Joy, B.A., with Honours in psychology and sociology, class II(ii), 1964
Hillier, Judith Ann, B.A., with Honours in sociology, class II(ii), 1962
Hillyer, Michael Alfred, B.Sc., with Honours in civil engineering, class II(ii), 1962
Hilton, Edward William, B.A., with Honours in general studies, class III, 1963
Freda Kathleen, B.A., with Honours in history, class III, 1962
Jeffrey, B.A., with Honours in Latin, class I, 1963
John Anthony, B.A., with Honours in history, class II(ii), 1963
Patricia (Mrs. Hutchinson), B.A., with Honours in English, class I, 1958
Peter, B.A., with Honours in geography and history, class III, 1963
Hind, Marie Veronica, B.Sc., 1961
Hindle, Keith Haworth, B.Sc., 1964
Hindley, Norman Keith, B.Sc., with Honours in physics, class I, 1959; Ph.D. (*in absentia*), 1962
Hinds, Kathleen Doris, B.A., with Honours in French, class II(ii), 1963
Hine, Anthony Brian, B.Sc., with Honours in chemical engineering, class III, 1962
Hinsley, Richard Spencer, B.Sc., with Honours in mining, class II(ii), 1960; Ph.D., 1964
Hinson, David Stoakley, M.B., Ch.B., 1960
Hirsh, Laurence Daniel, B.Sc., with Honours in general studies, class III, 1964
Hirst, Jean, B.Sc., with Honours in general studies, class III, 1963
Histed, Marjorie Alberta, B.A., with Honours in geography, class II(i), 1963
Hobbs, Patricia Mary, B.A., with Honours in music, class II(i), 1962
Hobman, Farnell Richard, B.Sc. (agricultural studies), 1963
Hobson, Donald, B.Ch.D., 1961
Geoffrey Keith, B.Sc., with Honours in chemistry, class I, 1964
John Geoffrey, B.A., with Honours in modern languages, class II(ii), 1961
Hocknell, Elizabeth Jane, B.A., with Honours in psychology and sociology, class II(ii), 1964
Hodge, Jean Lynnette, B.A., with Honours in English, class II(ii), 1961
Hodgin, Raymond William, LL.B., with Honours, class II(ii), 1961
Hodgkinson, Bruce Ian, B.Sc., with Honours in civil engineering, class II(i), 1961
Hodgson, Derek Raymond, B.Sc., 1950; Ph.D., 1961
Martyn John, B.Sc., in general studies, 1964
Peter Barrie, M.Sc., 1961
Philip Noel, B.Sc. (agricultural studies), 1963
Hodkinson, Herbert David, B.Sc., with Honours in agricultural studies, class II(i), 1963
Hodson, Helen Mary, B.Sc., with Honours in general studies, class II(ii), 1964
Lyn, B.A., with Honours in geography and history, class II(ii), 1963
Hofmann, Sabine Angelika, B.A., with Honours in German, class II(ii), 1964
Hogarth, Walter Joseph, B.A., with Honours in economics, class III, 1963
Hogg, Maire Lorraine, B.Sc., with Honours in chemistry, class II(ii), 1963
Richard, B.Sc., with Honours in ceramics, class II(i), 1963
Raymond James, B.A., with Honours in psychology, class II(i), 1961
Holbrook, Colin George, B.Sc., with Honours in fuel science, class III, 1964
Holden, Anthony, B.A., with Honours in general studies, class II(ii), 1961
Brian, B.Sc., 196-
Dennis, B.Sc., with Honours in mining, class II(ii), 1962
Michael Preston, M.B., Ch.B., 1962
Thomas More, B.Sc., with Honours in physics, class I, 1961
Holdom, Roger Scott, B.Sc., with Honours in bacteriology, class II(i), 1961
Holdsworth, Mary Josephine (Mrs. Chinnery), M.Sc., 1960

Hole, Richard Wordsworth, B.Sc., with Honours in mechanical engineering, class II(i), 1962
Holford, Derek Graham, B.Sc., with Honours in chemistry, class III, 1962
Holiday, Peter George, B.A., with Honours in history, class II(i), 1963
Holland, Christine Ann, B.Sc., with Honours in general studies, class III, 1964
Christopher John, B.Sc., with Honours in civil engineering, class II(i), 1961
Christopher Noel, B.Sc., with Honours in civil engineering, class II(ii), 1963
James Edward, B.A., with Honours in general studies, class II(ii), 1964
John Cecil Henry, B.Sc. (agricultural studies), 1963
Philip, B.A., with Honours in English, class II(ii), 1964
Holliday, Alan, B.A., with Honours in economics with statistics, class II(ii), 1964
Arthur Kenneth, B.Sc., with Honours in chemistry, class I, 1940; Ph.D., 1942; D.Sc., 1961
Holling, Graham Edgar, B.Sc., with Honours in ceramics, class III, 1963
Hollings, Christopher Paul, B.Ch.D., 1961
Hollins, Brian Eric, B.Sc., with Honours in electrical engineering, class II(i), 1961
Hollis, John Winston, B.Sc., with Honours in chemical engineering, class III, 1963
Holman, Geoffrey Edmund, B.Sc., with Honours in civil engineering, class III, 1963
Holme, Charles Arthur, B.A., with Honours in general studies, class II(ii), 1962
Ian, B.Sc., with Honours in textile chemistry, class II(i), 1962
Holmes, David Morris, B.Sc., with Honours in physics, class III, 1963
Isobel Ann, B.Sc., with Honours in general studies, class II(i), 1963
John Herbert, B.Sc., with Honours in leather science, class II(ii), 1963
John Robin, B.A., with Honours in philosophy and politics, class II(i), 1964
Holroyd, Anthony Michael, B.Sc., with Honours in physics, class II(ii), 1964
Michael Saxton, B.Ch.D., 1961
Holt, Ivan Edmund, B.A., 1937; M.A. (*in absentia*), 1962
John Hindle, B.Com., with Honours, class III, 1961
John William, B.Sc., 1963
Holton, John Bernard, Ph.D., 1963
Homer, Richard William, B.Sc., with Honours in mechanical engineering, class II(ii), 1963
Hood, Dennis, B.A., in general studies, 1961
Hook, Colin Michael, B.A., with Honours in geography, class III, 1963
Hooper, Eric Stanley, LL.B., with Honours, class II(i), 1963
John Charles, B.A., with Honours in French, class II(ii), 1962
Leslie Reginald, B.Sc., with Honours in physics, class II(ii), 1963
Hope, Harry Charles Godfrey, LL.B., with Honours, class III, 1963
Robert Anthony, B.Sc., with Honours in agricultural studies, class II(ii), 1963
Hopkin, Norman David, B.A., with Honours in history, class II(i), 1964
Hopkins, David Brian, B.Sc., with Honours in civil engineering, class II(i), 1961
David Julian, M.B., Ch.B., 1962
Harry Lionel, B.Sc., with Honours in mechanical engineering, class I, 1964
Ian Pearson, B.A., with Honours in history, class II(i), 1963
Hopkinson, John, B.A., with Honours in Spanish, class II(ii), 1964
John Michael, M.B., Ch.B., 1962
Hopley, Thomas Arthur, B.Sc., in general studies, 1962
Hopper, Margaret Jacqueline, B.A., with Honours in sociology, class II(ii), 1962
Michael Elliot, B.Sc., with Honours in agricultural studies, class III (*in absentia*), 1962
Hopson, Frank, B.Com., 1961
Hopwood, David, M.B., Ch.B., with Honours, class II, 1960
Leonard Cameron, B.Sc., with Honours in electrical engineering, class III, 1961
Horn, Ian Malcolm, B.A., with Honours in Latin, class II(ii), 1962
Horner, John Henry, B.A., with Honours in geography and history, class II(i), 1962
Judith Agnes, B.A., with Honours in general studies, class II(ii), 1964
Nerolie, B.Sc., with Honours in mathematics, class II(ii), 1961
Hornsey, Malcolm, B.Sc., 1962
Hornung, George, B.Sc., with Honours in geology, class II(i), 1958; Ph.D., 1961

Horseman, Martin Nicholas John, B.A., with Honours in economics and politics, class II(ii), 1964
Horsfall, Sheila, LL.B., with Honours, class III, 1961
Horsman, Karen, B.A., with Honours in English, class II(ii), 1964
Hosfield, John, B.Sc., with Honours in metallurgy, class II(ii), 1962
Hother-Lushington, Stephen, B.Sc., with Honours in mechanical engineering, class I, 1957; Ph.D., 1961
Hothersall, David Bryan, B.Sc., 1961
Patrick David, B.Sc., with Honours in mechanical engineering, class II(ii), 1962
Hough, James Harley, B.Sc., with Honours in general studies, class I, 1964
Houghton, Anthony George, B.Sc., with Honours in civil engineering, class III, 1964
Edward, B.Sc., with Honours in chemistry, class II(ii), 1964
Jocelyn Viola, B.Sc., with Honours in anatomy, class II(i), 1962
John Andrew, B.Sc., with Honours in physics, class II(i), 1963
House, John Stafford, B.Sc., in special studies (physics), 1962
Howard, Harold David, B.Sc., 1964
Jill Beryl, B.A., with Honours in history, class II(ii), 1961
Keith, B.Sc., with Honours in mining engineering, class I, 1952; M.Sc., 1963
Patricia Anne, B.A., in special studies (history), 1963
Howarth, Cathryn Barbara, M.B., Ch.B., 1963
Howe, Alan Edward, B.Sc., 1963
Clifford Ian, B.Sc., 1961
Keith Alan, B.Sc., 1964
Howgate, John Matthew, B.Com., with Honours, class II(ii), 1961
Howie, George, Ph.D. (*in absentia*), 1961
Howsen, Terence, B.A., with Honours in geography, class II(ii), 1963
Hoyal, Francis Michael Digby, B.Sc., with Honours in physiology, class I, 1962
Hoyle, Denis Herbert, B.Ch.D., 1961
Kathleen, B.Sc., 1961
Huckle, Malcolm Terry, B.Sc., with Honours in chemistry, class II(i), 1962; M.Sc., 1964
Hudson, David, B.Sc., in special studies (mathematics), 1962
David John, B.A., with Honours in general studies, class II(ii), 1964
Ingrid Victoria, B.A., with Honours in political studies, class II(i), 1963
James Michael, B.Sc., 1962
John David, B.Sc., with Honours in mechanical engineering, class I, 1959; Ph.D., 1962
Margaret, B.A., with Honours in German, class III, 1961
Peter, B.Sc., with Honours in chemistry, class II(ii), 1959; Ph.D. (*in absentia*), 1962
Hughes, Edgar Barrie, B.Sc., with Honours in physics, class I, 1958; Ph.D., 1961
Howard Francis, B.A., with Honours in history, class II(ii), 1962
Ian Edward, B.Sc., with Honours in pharmacy, class II(i), 1962; with Honours in pharmacology, class II(i), 1963
John, B.Sc., with Honours in civil engineering, class III, 1961
John Carrington, B.Sc., with Honours in physics, class II(ii), 1961
Martin Richard, B.Sc., 1964
Mary Christine, B.A., with Honours in English, class II(ii), 1964
Patricia Mary, B.A., with Honours in geography and history, class II(ii), 1962
Paul, B.A., with Honours in geography and politics, class II(ii), 1964
Paul Gilbert Matley, LL.B., with Honours, class II(ii), 1963
Thomas Alan, B.Sc., with Honours in metallurgy, class I, 1961
Hugill, Janet Lorraine, B.A., with Honours in general studies, class III, 1961
Hull, Edwin, B.Sc., 1962
Hulland, Valerie Mary, B.A., with Honours in theology, class II(i), 1962
Hulme, David Christopher, B.A., in general studies, 1963
Hum, Walter, LL.B., with Honours, class II(ii), 1963
Humberstone, Malcolm, B.Sc., 1964
Humble, Geoffrey David, B.Sc., with Honours in agricultural chemistry, class II(ii), 1962
Humphreys, Antony, B.Sc., with Honours in mathematics, class III, 1963

Humphries, Kelvin James, B.Sc., with Honours in chemical engineering, class II(ii), 1961
Leslie Kenneth, B.Sc., with Honours in general studies, class II(ii), 1962
Hundleby, Alan, B.A., with Honours in general studies, class III, 1963
Hunt, Bernard James, B.Sc., with Honours in chemistry, class II(i), 1963
George, M.Ed., 1963
John Edward, B.Sc., with Honours in general studies, class I, 1964
Julie Anne, B.A., with Honours in sociology, class II(ii), 1963
Keith Robert, B.A., in special studies (Latin), 1964
Kenneth, B.Sc., 1962
Patricia, B.A., with Honours in English and history, class II(ii), 1964
Richard Donald, B.A., with Honours in history, class II(i), 1963
Stephanie, B.A., with Honours in general studies, class I, 1964
Hunter, George, B.Sc., with Honours in chemical engineering, class III, 1961
Ian, B.Sc., in general studies, 1963
James Murray, B.Sc., with Honours in agriculture, class II(i), 1964
Hurrell, David, B.A., with Honours in French, class III, 1962
Hurst, Donald, B.A., with Honours in geography, class II(ii), 1961
Richard Arthur Alexander, Ph.D., 1961
Hurworth, Michael, B.A., with Honours in Latin, class III, 1963
Husain, Husain Mohammad, B.Sc., with Honours in civil engineering, class II(ii), 1961
Hussein, Abdel-Aziz Abdul-Kader, Ph.D. (*in absentia*), 1963
Hussey, Helen, B.Sc., with Honours in biochemistry, class I, 1962
Hutchings, Francis Owen, B.A., in special studies (theology), 1962
Hutchinson, Brian Cyril, M.B., Ch.B., 1961
David, B.Sc., 1961; B.Ch.D., with Honours, class II, 1963
David John, B.A., with Honours in English, class II(ii), 1962
Malcolm, B.Sc., with Honours in general studies, class I, 1961
Mrs. (see also Hilton, Patricia), Ph.D., 1962
Stuart, B.A., with Honours in English, class II(i), 1963
Huxley, Philip Henry James, LL.B., with Honours, class II(ii), 1964
Hyatt, David, B.Sc., with Honours in chemistry, class II(ii), 1964
Hyder, Mohamed, Ph.D. (*in absentia*), 1962
Hyderally, Hatim Abdul Tyab, M.B., Ch.B., 1962

Ibbotson, Michael, B.Sc., with Honours in civil engineering, class II(ii), 1964
Idle, Terence, B.Sc., with Honours in mechanical engineering, class II(i), 1964
Illingworth, Edgar, B.A., with Honours in history, class II, 1934; M.A., 1961
Elizabeth Mary, B.Sc., with Honours in general studies, class II(i), 1961
John David, B.Sc., with Honours in biochemistry, class III, 1964
Inan, Vedat, B.Sc., 1964
Inch, Peter John, B.A., with Honours in geography and history, class II(i), 1962
Ind, William, B.A., with Honours in English and history, class II(ii), 1964
Ingebrigtsen, Trygve, B.Ch.D., 1961
Ingham, Anthony Harold, B.A., with Honours in economics, class II(ii), 1961
David Peter, B.Sc., with Honours in electrical engineering, class III, 1963
Derek Binns, B.Sc., with Honours in mathematics, class I, 1963
Ingold, Kay Pamela, B.A., in general studies, 1963
Ingram, Christopher Robin, B.Ch.D., 1963
Terence John, B.A., with Honours in general studies, class II(ii), 1963
Inoma, Onybuch Joseph, LL.B., with Honours, class III, 1961
Ireland, Jennifer Ann, B.A., with Honours in geography, class II(ii), 1964
Irvin, Lance, B.Sc., 1964
Irvine, Diane Dulcie, B.A., with Honours in general studies, class III, 1964
Robin Anthony Nicol, LL.B., with Honours, class II(i), 1963

Jackson, Ann, B.A., with Honours in French, class II(i), 1962
Anna Janina, B.A., in special studies (mathematics) (*aegrotat*), 1964
Brian Stanley, B.A., with Honours in history, class II(ii), 1961
David, B.Sc., with Honours in chemistry, class III, 1964
David Spence, B.Sc., in special studies (physics), 1961
Evelyn Dorothy, B.Sc., 1964
Garry James, B.A., with Honours in English, class II(ii), 1962
Glenys Anne, B.A., in special studies (English), 1964
John Peter, B.Sc., with Honours in mechanical engineering, class II(ii), 1962
Kenneth Bruce, B.Sc., with Honours in chemical engineering, class II(i), 1963
Kenneth Thomas, B.Sc., with Honours in metallurgy, class II(ii), 1961
Patricia Mary, B.A., with Honours in history, class III, 1961
Pauline, B.A., with Honours in Latin, class II(i), 1962
Peter Anthony, B.Sc., 1964
Philip Paul, B.A., with Honours in German, class II(i), 1961
Ruth, B.A., with Honours in German, class II(ii), 1962
Susan, B.A., with Honours in Russian, class III, 1963
Jacobs, Barbara Elizabeth, B.A., with Honours in theology, class III, 1963
David John, B.A., with Honours in economics, class II(ii), 1962
Jacombs, Josephine Mary, B.A., with Honours in history, class III, 1964
Jagger, Derek, B.Sc., 1962
Jaggs, Barry, B.A., with Honours in Spanish, class II(i), 1964
James, Bruce, B.A., with Honours in English and fine art, class II(i), 1964
Cherry, B.Ch.D., 1961
David Norman, B.A., with Honours in economics, class II(ii), 1963
Michael Barrett, B.Ch.D., 1964
Michael Peter, B.A., with Honours in English, class II(ii), 1964
Peter Arthur Robert, B.A., with Honours in English, class II(ii), 1961
Terence Edmund, B.A., with Honours in sociology and philosophy, class II(ii), 1964
Jamieson, Jeremy Patrick, B.A., with Honours in economics and politics, class II(ii), 1964
Jamil, Adil Kamal, Ph.D., 1963
Zuhair Kamel, M.Sc., 1961
Jaques, John, B.Ch.D., 1963
Jarratt, Jennifer Mary, B.Sc., with Honours in general studies, class III, 1963
Jarvis, Arthur Victor, B.A., with Honours in general studies, class III, 1961
James Robert, B.Sc., 1964
Michael Bennett, B.Sc., with Honours in colour chemistry, class II(i), 1961
Jasper, Ronald Claud Dudley, B.A., with Honours in history, class II, 1938; M.A., with distinction, 1940; B.D., 1950; D.D., 1961
Jayswal, Deo Narain, B.Sc., 1964
Jeeves, Lurline Anne, B.A., with Honours in German, class III, 1961
Jeff, Anne Louise, B.A., with Honours in French, class III, 1962
Jefferies, Jeremy John, B.A., with Honours in English, class II(i), 1962
Trevor Graham, B.Sc., in special studies (chemistry), 1963
Jeffery, Peter James, B.Sc., with Honours in chemistry, class II(ii), 1963
Susan Smeaton, B.A., with Honours in sociology, class II(ii), 1963
Jeffries, William Michael, B.A., with Honours in general studies, class II(ii), 1961
Jeffs, Helen Josephine, B.A., in special studies (French), 1961
Jenkins, Anthony Russell, B.Sc., 1964
Graham, B.Sc., in special studies (mathematics), 1961
John Michael, B.Sc., with Honours in chemistry, class II(i), 1962
Jennings, Brian, B.Sc., 1962
Graham, B.Sc., with Honours in metallurgy, class II(ii), 1962
Jennison, John David, B.Sc., with Honours in colour chemistry, class I, 1960; Ph.D., 1963
Jerome, Richard Hugh, B.A., with Honours in textile management, class II(i), 1964
Jerram, Kenneth Ian, LL.B., with Honours, class II(ii), 1961
Jesson, Una Avril, B.A., in combined studies (philosophy and history), 1961
Jessop, Allen, B.Sc., with Honours in electrical engineering, class III, 1961

Jessop, Dennis, B.A., in special studies (modern languages), 1961
Jewell, Edward John, B.Sc., with Honours in agricultural chemistry, class II(i), 1961
Jhaveri, Pritibala Shantilal, B.Sc., in special studies (mathematics), 1962
Joannides, Anthony, B.Sc., 1964
Jerolemos Ioannou, M.B., Ch.B., 1961
Johanpur, Farhang, B.A., with Honours in English, class II(ii), 1962
Johansson, Carl Max Auguste, B.Sc., with Honours in general studies, class II(ii), 1957; M.Sc., 1963
Johnson, Mrs. Anne, M.B., Ch.B., 1960
Brian Cyril, B.Sc., 1962
Brian Derek, B.Sc., in general studies, 1962
Camilla Mary, B.A., with Honours in geography and sociology, class III, 1964
Christopher William, B.Sc., with Honours in general studies, class II(i), 1964
Clive Anthony, B.Sc., with Honours in general studies, class I, 1963
Colin Arthur, B.Sc. (agricultural studies), 1961
David Edward, B.A., with Honours in classics, class II(i), 1964
David Julian, B.Sc., with Honours in physics, class III, 1957; M.Sc., with distinction, 1960
David Kirk, B.Sc., with Honours in physics, class II(i), 1964
Edwin Royle, B.Sc., with Honours in metallurgy, class III, 1964
George William, B.Sc., with Honours in physics, class II(i), 1957; Ph.D., 1961
Helen, B.A., with Honours in geography, class III, 1964
Joseph, B.Sc., with Honours in agriculture, class II(i), 1964
Lionel, B.Sc., with general Honours, class III, 1949; M.Sc., with distinction, 1958; Ph.D., 1960
Patricia Anne, B.Sc., with Honours in general studies, class I, 1958; Ph.D., 1962
Paul Stapleton, LL.B., with Honours, class II(ii), 1964
Peter Alan, B.Sc., with Honours in civil engineering, class I, 1960; Ph.D., 1963
Richard Alan, M.B., Ch.B., 1963
Robert Cecil, B.A., with Honours in economics with statistics, class II(ii), 1964
Walter Alan, B.Sc., with Honours in general studies, class III, 1964
Victor Ogafoe Ibikunle, B.Sc., with Honours in general studies, class III, 1962
Johnston, Bryan William, B.Sc., with Honours in chemical engineering, class II(ii), 1961
David, B.Sc., with Honours in chemistry, class III, 1964
Jolley, David Ian, B.A., with Honours in French, class II(i), 1962
Jollie, Ian Andrew Dickson, M.B., Ch.B., 1962
Jones, Alan, B.Sc., with Honours in chemistry, class II(i), 1962
Alun Russell, M.A., 1964
Arfon Harry, B.Sc., with Honours in civil engineering, class I, 1955; Ph.D. (*in absentia*), 1960
Arthur Graham, M.B., Ch.B., 1963
Barry John, B.A., with Honours in Russian, class II(ii), 1964
Brenda Hilary, B.A., in special studies (Russian), 1961
Brian, B.Sc., with Honours in civil engineering, class II(ii), 1964
Brian Wickett, B.Sc., with Honours in chemistry, class III, 1957; M.Sc., 1961
Christine Dorothy, B.Sc., 1964
Christopher Roberts, B.Sc., with Honours in civil engineering, class II(ii), 1964
Colin David, B.Sc., 1962
Coral Rita, B.A., with Honours in geography, class II(ii), 1961
Cynthia Patricia (Mrs. Bagley), B.A., with Honours in French, class I, 1958
David Jone, B.Sc., 1962
Evan Benjamin Gareth, Ph.D., 1963
Francis, B.A., with Honours in French, class II(i), 1951, Ph.D., 1961
Geoffrey Owen, B.Sc., with Honours in general studies, class III, 1961
Gladys Margaret, B.A., in special studies (sociology), 1961
Glenys Eason, B.A., with Honours in general studies, class III, 1963
Glyn Christopher, B.Sc., in general studies, 1962

Jones, Gordon Leonard, B.Sc., with Honours in biochemistry, class II(ii), 1957; Ph.D., 1960
Gordon Pryce, B.A., with Honours in English, class II(i), 1963
Griffith William, B.A., with Honours in history, class II(ii), 1956; M.A., 1961
Howard, B.Sc., with Honours in chemistry, class I, 1959; Ph.D. (*in absentia*), 1962
Ian Frederick, B.Sc., with Honours in pharmacy, class II(ii), 1963
James Colin, B.A., in special studies (history) (*ægrotat*), 1963
John Alan, B.Sc., with Honours in electrical engineering, class I, 1962
John Alan, B.A., with Honours in Spanish, class II(i), 1964
John Keith, B.Sc., 1963
John Kenrick, B.A., with Honours in general studies, class II(ii), 1961
Keith Frederick, B.A., with Honours in Russian, class III, 1962
Leslie Michael, B.A., with Honours in French, class III, 1962
Linda Arnon, B.A., with Honours in sociology, class III, 1963
Margaret Beryl, B.A., with Honours in English, class II(ii), 1963
Martin Holt, B.A., with Honours in economics, class II(ii), 1964
Maureen, B.A., with Honours in French, class III, 1961
Mavis Ruth, B.A., with Honours in history, class II(ii), 1963
Michael Lown, B.Sc., with Honours in mining, class II(i), 1961
Peter John Elias, B.A., with Honours in English and music, class II(ii), 1964
Robert, B.A., with Honours in history, class II(i), 1961
Robert Alun, B.Sc., with Honours in general studies, class III, 1962
Robert Gwynn, B.Sc., with Honours in chemistry, class III, 1962
Ronald Allan, B.Sc., 1961
Rosemary Lewis, B.A., in general studies, 1962
Sandra Ann, B.A., with Honours in sociology, class II(ii), 1964
Susan Cicely, B.Sc., with Honours in general studies, class II(i), 1962
Susanne Elizabeth, B.A., with Honours in textile design, class III, 1964
Terrence Llewellyn, B.A., with Honours in geography, class II(i), 1963
Timothy John, B.Sc., with Honours in mechanical engineering, class II(i), 1964
Wilfred Thomas, B.Sc., in general studies, 1963
William, B.Sc., 1961
Jordan, Diana Mary, B.A., with Honours in history, class II(i), 1961
John, B.A., with Honours in sociology, class III, 1961
Peter Harry, B.A., with Honours in French, class II(ii), 1964
Joseph, Brian Wasse, M.B., Ch.B., 1961
Joshi, Arvind Dattatrey, Ph.D. (*in absentia*), 1964
Joyce, Anthony Edward, B.Sc., with Honours in physics, class II(i), 1963
Joynt, Charles Neil, B.Sc., 1961
Jugdutt-Prithipaul, Mrs. Dulari, B.A., with Honours in general studies, class III, 1962
Just, David James, B.Sc., with Honours in civil engineering, class II(ii), 1960; Ph.D., 1964

Kagule-Magambo, James Emanuel Nyondo, B.Sc., with Honours in geology, class II(ii), 1964
Kahramanoglou, Damianos Christos, B.Sc., with Honours in chemical engineering, class II(ii), 1964
Kain, John Michael Anthony, B.Sc., with Honours in electrical engineering, class III, 1963
Kaiser, Michael Bernard, B.A., with Honours in English, class II(ii), 1964
Kaltsoyannis, Alex, M.Sc., 1964
Kane, Brian Martin, B.A., with Honours in German, class II(i), 1963
Kargbo, Thomas Kahota, M.B., Ch.B., 1964
Karim, Firoz Remtulla, B.Sc., 1964
Karlin, Karl Gustav, B.Sc. (*aegrotat*), 1962
Kasparian, Marie, Ph.D. (*in absentia*), 1964
Kaul, Frederick John, B.Sc., 1964
Kay, Edmund John, M.B., Ch.B., 1962
Graeme Maxwell, B.Sc., with Honours in chemistry, class III, 1964
Marion, LL.B., with Honours, class II(ii), 1963

Kaye, Charles Redfern, B.Sc., with Honours in mining, class II(i), 1961
Roger William, B.Sc., 1962
Keating, Brian, B.A., with Honours in modern languages, class II(ii), 1962
Keddie, Graham Stewart, B.Sc., with Honours in electrical engineering, class III, 1962
Kedia, Hari Prasad, M.Sc., 1963
Mrs. Sushila, M.Sc., 1963
Keir, Robert, B.A., with Honours in French, class II(i), 1961
Kellett, Doreen, B.A., with Honours in music, class II(i), 1963
Jean, B.A., with Honours in geography, class II(ii), 1961
John, B.Sc., 1961
Thomas, B.Sc., 1963
Kelly, Gerald Edmund, B.A., with Honours in economics, class II(ii), 1961
Kenneth, B.A., with Honours in geography, class II(i), 1959; M.A. (*in absentia*), 1961
Margaret Doris, B.A., with Honours in French, class II(i), 1964
Marjorie Elizabeth, B.Sc., with Honours in mathematics, class II(ii), 1961
Michael, B.Sc., with Honours in civil engineering, class II(i), 1962
Patrick Hartmann, B.Sc., 1964
Peter Gerald, B.Sc., with Honours in biochemistry, class III, 1961
Tessa, B.A., with Honours in sociology, class II(ii), 1962
Kemp-Gee, Joan Elizabeth, B.Sc., with Honours in general studies, class II(ii), 1964
Kenchington, William, B.Sc., with Honours in zoology, class II(ii), 1961
Kendal, Diana Margaret, B.A., with Honours in French, class II(ii), 1961
Kendrew, Jean, B.Sc., with Honours in general studies, class I, 1961
Maureen, B.Sc., with Honours in mathematics, class II(i), 1963
Kenna, Victor Ernest Glencoe, B.A., 1924; Litt.D., 1961
Kennally, Daniel James, B.A., with Honours in political studies, class II(ii), 1964
Kennedy, Anna Christine, B.A., in special studies (history), 1964
Anthony, B.A., with Honours in general studies, class II(ii), 1962
Peter John, B.A., with Honours in political studies, class II(ii), 1964
Kenny, Michael John, Ph.D., 1962
Yvonne Lesley, B.A., in special studies (Italian), 1964
Kent, Anthony David, B.A., with Honours in economics, class III, 1961
Frank, B.Sc., 1964
James William, B.Sc., with Honours in general studies, class III, 1962
Margaret Anne, B.Sc., with Honours in psychology, class II(i), 1964
Kenward, David Howard, M.B., Ch.B., 1960
Kenworthy, Brian, B.A., with Honours in Spanish, class II(i), 1961
David Alan Peter, B.A., with Honours in classics, class II(ii), 1963
Kenyon, Peter, B.Sc., 1961
Robert Edward, B.A., with Honours in sociology, class II(ii), 1961
Kephalas, Panos Anastasiou, B.Sc., 1964
Kerr, Thomas Alan, M.B., Ch.B., 1961
William John Robert, B.A., with Honours in general studies, class III, 1961
Kerrison, David Gregory, B.A., with Honours in English, class II(ii), 1961
Kershaw, Leslie, B.Sc., with Honours in chemistry, class II(ii), 1962; M.Sc., 1964
Malcolm Stuart, B.Sc., with Honours in physics, class I, 1961
Kerslake, Harold John Brendon, B.Sc., with Honours in electrical engineering, class III, 1963
Ketkar, Hemant Gajanan, M.Sc. (*in absentia*), 1963
Khalique, Abdul, Ph.D., 1960
Kharusi, Raya Ali Said, B.A., with Honours in history, class II(ii), 1964
Khilji, Zafar Masud, Ph.D., 1963
Khopkar, Prabhakar Kashinath, M.Sc., 1963
Khudri, Tahir Ghani, B.Sc., with Honours in electrical engineering, class II(i), 1961
Kidd, Christopher John Frederick, LL.B., with Honours, class II(i), 1962
John Bainbridge, B.Sc., 1963
Kilburn, Geoffrey, LL.B., with Honours, class II(ii), 1961
Killen, Stuart Laurence, LL.B., with Honours, class II(i), 1963

Killick, Alan, B.Sc., with Honours in chemistry, class II(i), 1961
Kilner, Robert, B.Sc., with Honours in general studies, class III, 1963
Kilty, Margaret Mary, B.A., with Honours in Spanish, class II(i), 1960; M.A., 1962
Kimble, Brian George, B.Sc., 1963
King, Mrs. Adèle Cockshoot, M.A. (*in absentia*), 1960
Barbara Alice, B.Sc., with Honours in general studies, class II(i), 1962
Bruce Alvin, Ph.D. (*in absentia*), 1960
Graham Robert, B.A., with Honours in classics, class II(ii), 1961
Hugh, B.Sc., with Honours in physics, class III, 1963
John Michael, B.Sc. (agricultural studies), 1958; M.Sc., 1960
Michael Thomas, B.A., with Honours in general studies, class II(ii), 1964
Paul Stuart, LL.B., 1964
Philip, B.Sc., with Honours in mining, class II, 1957; Ph.D., 1962
Reginald, B.Sc., with Honours in civil engineering, class II(i), 1961
Roger Martin, B.A., with Honours in general studies, class III, 1964
Kingston, Jennifer Anne, B.A., with Honours in geography, class III, 1962
Michael Francis Eden, B.Sc., 1962
Kinsey, Dorothy Patricia, B.A., with Honours in psychology and sociology, class II(ii), 1963
Kirby, Carl Edward, B.Sc., with Honours in mining, class II(i), 1961
Kirk, Michael, B.Sc., with Honours in civil engineering, class II(ii), 1961
Roy Walter, B.A., with Honours in history, class III, 1962
Kirkland, Caroline Mary, B.A., with Honours in English, class II(ii), 1961
Kirkman, Leslie Eric, B.Sc., 1962
Kirkup, Brian, B.Sc., in special studies (chemistry), 1963
Kirpalani, Heeranand, B.Com., with Honours, class III, 1961
Kisalu, Remigius, M.B., Ch.B., 1963
Kitchen, Moira Bernice, B.A., with Honours in Spanish, class II(ii), 1963
Peter, B.Sc., with Honours in physics, class II(i), 1964
Kitchin, Roger Howard, B.Sc., with Honours in electrical engineering, class II(i), 1963
Kitson, Beryl, LL.B., with Honours, class III, 1964
Kitto, Graham, B.Sc., with Honours in textile chemistry, class II(ii), 1961
Klinger, Michael, M.B., Ch.B., 1961
Knapton, John James Fox, B.Sc., 1960; Ph.D., 1963
Knight, Adrian Lester, B.A., with Honours in economics, class III, 1963
Christopher John, B.Sc., 1964
Ronald Christopher, B.Sc., with Honours in chemistry, class II(ii), 1962
Sandra, B.A., with Honours in German, class II(ii), 1964
Knopf, Henry, B.A., with Honours in Semitic languages and literatures, class I, 1957; Ph.D., 1964
Knowles, Alan Edmund, B.Sc., with Honours in physics, class II(i), 1963
Barbara Ann, B.A., with Honours in French, class II(i), 1964
Ian Keith, B.A., with Honours in general studies, class II(ii), 1963
James Michael, B.Sc., with Honours in civil engineering, class II(ii), 1964
Josephine Carol, B.A., with Honours in general studies, class III, 1963
Knox, Ian Stephen, LL.B., with Honours, class III, 1964
Kathleen Cecilia, B.Sc., with Honours in general studies, class II(ii), 1964
Ko, Doris Suit Yiu, B.A., with Honours in English, class II(ii), 1963
Kohen, Ibrahim Albert Saul, B.A., with Honours in economics, class III, 1961
Kong, Fung Kew, Ph.D., 1962
Kover, Tihamer Janos, B.Sc., 1962
Kroh, Jerzi, Ph.D. (*in absentia*), 1960
Kruger, Philip Johannes, Ph.D. (*in absentia*), 1962
Kullich, Peter, B.A., with Honours in geography, class III, 1963
Kumar, Narendra, B.Sc., 1964
Satinder, B.Sc., 1960
Kunz, Stephen Edwin John, B.Sc., 1962
Kyei, Albert Kenneth, B.A., in special studies (sociology), 1962

Lacey, Keith Anthony, M.B., Ch.B., 1963
Laidlaw, Irvine Alan Stewart, B.A., with Honours in economics, class III, 1963
Robin Patrick, B.A., with Honours in English, class II(i), 1963
Laidler, Daphne Hilary Margaret, B.A., with Honours in general studies, class II(ii), 1961
Lake, Brian Derek, B.Sc., with Honours in chemistry, class II(ii), 1958; Ph.D., 1961
Margaret Anne, B.A., with Honours in English, class II(ii), 1964
Lam, Zarrin, B.A., in special studies (English) (*in absentia*), 1961
Lamb, Jean, B.A., with Honours in sociology, class II(ii), 1964
John Renton, B.A., with Honours in French, class III, 1964
Lambert, Jack, B.A., with Honours in German, class III, 1964,
Peter John Leonard, B.Sc., with Honours in chemical engineering, class II(ii), 1964
Susan Elizabeth, B.A., with Honours in music, class II(ii), 1961
Lambson, Margaret, M.B., Ch.B., 1960
Lamming, Philip Andrew, B.Sc., with Honours in electrical engineering, class III, 1962
Lancaster, Malcolm Barrie, B.Sc., with Honours in physics, class I, 1964
Land, Brian Haldane, B.Sc., with Honours in pharmacy, class II(i), 1962; with Honours in pharmacology, class II(i), 1963
Landcastle, Vivien Janet, B.A., with Honours in French, class II(ii), 1964
Lander, Anthony, B.A., with Honours in textile design, class III, 1963
David Victor, B.A., with Honours in English, class III (*in absentia*), 1962
Lane, Marion Christine, B.Sc., with Honours in general studies, class II(i), 1961
Lang, Joan Mary, B.A., with Honours in history, class II(i), 1961
Langley, Alan Maxwell Clifford, B.A., with Honours in general studies, class I, 1961; M.A., 1963
Langridge, Patricia, B.Sc., with Honours in bacteriology, class II(i), 1963
Langstone, George Albert, B.A., with Honours in philosophy and English literature, class II(ii), 1964
Langtry-Langton, Deenagh Mary, B.Ch.D., with Honours, class II, 1964
Lanham, David John, LL.B., with Honours, class I, 1962
Lanigan, Edward Patrick, B.Sc., with Honours in chemistry, class II(ii), 1963; M.Sc., 1964
Lappage, James, B.Sc., with Honours in general studies, class III, 1960; M.Sc., 1963
Lappin, Janet Margaret, B.A., with Honours in history, class II(ii), 1964
Larché, Louis Serge Jean-Marie Alain, B.A., with Honours in general studies, class III, 1962
Large, Timothy Walker, B.A., with Honours in economics, class III, 1963
Lasebikan, Abimbola Oluwole, B.Com., 1964
Laslett, Christopher John, B.A., with Honours in Latin, class II(i), 1964
Latham, Jean, B.A., with Honours in English, class II(ii), 1964
Robert, B.Sc., 1964
Latton, Ann Marie, B.A., with Honours in sociology, class III, 1964
La Trobe, David Michael, B.A., with Honours in general studies, class II(ii), 1961
Laughey, William, B.A., in general studies, 1961
Laurence, Gerald Steven, Ph.D. (*in absentia*), 1961
Lavan, Michael Rodney, B.A., with Honours in history, class II(ii), 1961
Lavender, Antony Michael, B.Sc., 1963
Laverick, Eva, B.A., with Honours in French, class II(ii), 1963
Law, Donald William, B.Sc., with Honours in physics, class II(i), 1963
Marion Hope Nelson, B.A., with Honours in French, class II(ii), 1961
Lawrence, Brian Edward, B.A., with Honours in English, class II(i), 1961
Gillian Brenda, B.A., with Honours in English, class II(ii), 1961
Jeremy, B.Sc., 1964
Joan Rita, B.A., with Honours in history, class II(ii), 1962
John Gordon, B.A., with Honours in philosophy, class III, 1950; M.A., 1961
Judith Anne, B.A., with Honours in Latin, class III, 1963
Paul Victor, B.Sc., with Honours in civil engineering, class II(ii), 1963
Peter Edward, B.Sc., 1962
Lawrenson, Alan B.A., with Honours in general studies, class II(ii), 1962
Malcolm William, B.A., in general studies, 1963
Lawson, Omojowo Victoria, B.A., with Honours in English, class II(ii), 1961

Lawson, Robin Ian, B.A., in general studies, 1962
Laycock, Colin Neve, B.A., with Honours in Latin, class II(ii), 1963
David Brian, B.Sc., with Honours in mechanical engineering, class I, 1964
Layfield, Jennifer Anne, B.A., with Honours in French, class II(ii), 1964
Layn, William John, B.Sc., with Honours in chemistry, class II(ii), 1961
Laythorpe, Andrew McEwan, B.Com., 1964
Lazarus, David Mendel, B.Sc., 1964
Leach, Barbara Joan, B.A., with Honours in Latin, class I, 1961
Michael, B.Sc., with Honours in leather science, class II(i), 1964
Ruth Gillian, LL.B. (*aegrotat*), 1964
Leadley, Gillian Mary Walker, B.A., with Honours in general studies, class II(ii), 1963
Leake, Cristina Olive, M.B., Ch.B., 1961
Leamy, Alan Reginald, B.A., with Honours in history, class II(i), 1963
Leary, Malcolm, B.A., with Honours in economics, class II(ii), 1964
Leather, Joshua Thomas, B.Sc., with Honours in mechanical engineering, class III, 1961
Leaver, Graham, B.Sc., with Honours in physics, class II(i), 1964
Margaret Winifred, B.Sc., with Honours in geography, class II(ii), 1961
Le Bars, Simon Jean, B.Sc., with Honours in civil engineering, class II(ii), 1963
Lebi, Claudius Olanrewaju, B.A., in special studies (political studies), 1964
Ledward, David Arthur, B.Sc., with Honours in chemistry, class II(i), 1964
Lee, Adrian John, B.A,, in special studies (theology), 1963
Alan, B.Sc., with Honours in fuel science, class II(i), 1964
Andrea Joan, LL.B., with Honours, class III, 1962
Andrew Rodney, B.A., with Honours in German, class II(i), 1962
Anthony Michael, B.Sc., 1959; M.Sc., 1962
David Arthur, B.Sc., with Honours in fuel science, class II(i), 1963
Eric John, B.A., with Honours in French, class III, 1961
James Alan, B.Sc., 1963
Jennifer, B.Sc., with Honours in general studies, class III, 1962
Susan, B.A., with Honours in general studies, class III, 1961
Susan Jennifer, B.A., with Honours in general studies, class II(ii), 1961
Leech, Jean Margaret, B.Sc., with Honours in biochemistry, class III, 1963
Leedale, Rodney John, B.A., with Honours in general studies, class III, 1962
Leeming, Robert, B.Sc., 1962
Lees, Margaret, B.Sc., with Honours in geography, class II(i), 1963
Leeson, Peter Colin, B.Sc., 1963
Leigh, Christine Mary, B.A., with Honours in geography, class II(i), 1963
Leiper, Margaret Ogilvie, B.A., with Honours in Russian, class II(i), 1962
Lemer, Max Marcel, LL.B., with Honours, class III, 1963
Lemmon, David Frederick, B.Sc., 1963
Lenihan, Brigid Maria, B.A., with Honours in history, class II(i), 1962
Lennard, Ian Christopher Bryce, B.Sc., with Honours in metallurgy, class II(ii), 1963
Lepist, Laos, B.Sc., with Honours in mechanical engineering, class III, 1961
Lepper, Adrian Murray, B.Sc., with Honours in fuel science, class I, 1962
Leslie, John Peter, B.A., in general studies, 1961
Lester, Derek Noel Reed, M.Ed., with distinction, 1962
Raymond George, B.Sc., with Honours in chemistry, class II(i), 1963
Lever, David Fielding, B.Sc., 1963
John Vernon, B.Sc., with Honours in physiology, class II(ii), 1961; M.B., Ch.B., 1963
Peter David, B.Sc., with Honours in civil engineering, class II(ii), 1963
Levi, Michael Phillip, B.Sc., with Honours in chemistry, class I, 1961
Levin, Enid Mae, B.A., with Honours in history, class II(i), 1964
Levy, John Christopher, LL.B., with Honours, class II(i), 1964
Lewandowski, Zygfryd Franciszek, M.A., 1962
Lewis, Ann Walford, B.A., with Honours in French, class II(i), 1962
Brian Wilcocks, B.Sc., 1961
Christopher Brinley Edge, B.Sc., with Honours in general studies, class I, 1964

Lewis, Christopher Millward, B.Sc., 1962
Christopher Thomas, LL.B., with Honours, class II(i), 1963
David Malcolm, B.Sc., with Honours in colour chemistry, class II(i), 1963
Jane Phillippa, B.A., with Honours in sociology, class III, 1964
Michael David, B.Sc., with Honours in civil engineering, class II(ii), 1962
Patricia Anne, B.A., with Honours in French, class II(i), 1964
Lieberman, Arnold Edward, B.A., with Honours in French, class III, 1961
Liebig, Danuta Maria, B.Sc., with Honours in chemistry, class II(i), 1962
Liebold, Bringfried George, B.A., with Honours in English, class II(ii), 1961
Light, Peter Dieter, B.Sc., with Honours in electrical engineering, class III, 1963
Lilwall, Nicholas Brier, B.Sc., with Honours in agricultural economics, class II(ii), 1964
Linder, Roger Walter, B.Sc., with Honours in general studies, class I, 1961
Lindsay, Francis David, B.A., with Honours in sociology, class II(ii), 1964
Linklater, Christine Powell, B.A., with Honours in Russian, class II(ii), 1964
Lipschitz, Barry, B.Sc., 1962
Lish, Sheila, B.Sc., with Honours in general studies, class III, 1964
Lishman, Cherry Jean, B.A., with Honours in French, class II(ii), 1964
Lister, William Brian, B.A., with Honours in Russian, class II(ii), 1961
Litherland, John Stuart, B.Sc., 1963
Little, Geoffrey David, B.Sc., with Honours in electrical engineering, class II(ii), 1962
Peter, B.Sc., in general studies, 1962
Littlewood, Antony Robert, B.A., with Honours in classics, class II(i), 1962
John Bradshaw, B.Sc. (agricultural studies), 1961
Peter Stuart, B.Sc., with Honours in chemistry, class I, 1961
Livesley, Brian, M.B., Ch.B., 1960
Lloyd, Joan Ann, B.A., in special studies (English), 1963
John, B.Sc., with Honours in physics, class II(i), 1964
Peter Lawrence, B.Sc., 1964
Stephen Harris, LL.B., with Honours, class III, 1961
Loat, Duncan Robin, B.Sc., with Honours in civil engineering, class II(ii), 1963
Lobb, Christine Elaine, B.A., with Honours in modern languages, class II(i), 1963
Lobo, John Simon, B.Ch.D., 1963
Lock, Leonard Andrew, B.Sc., 1963
Lockett, Harry, B.Sc., 1962
Lockwood, Adrienne, B.Sc., with Honours in general studies, class II(ii), 1961
John Craven, B.Sc., 1962
John Trevor, B.Ch.D., 1963
Lockyer, Eric John, B.Ch.D., 1963
Lodwick, Brian Martin, B.A., with Honours in history, class II(ii), 1961
Brinley, B.A., with Honours in psychology, class II(i), 1960; M.A., 1963
Lofthouse, John Herbert, B.Sc., with Honours in physics, class II(ii), 1960; Ph.D., 1963
Norman, LL.B., with Honours, class II(ii), 1964
Richard Wildon, M.Sc., 1961
Logan, Marie, B.A., with Honours in general studies, class II(ii), 1962
Lomas, Peter, B.Sc., with Honours in physics, class II(ii), 1964
Long, David Geoffrey, B.A., with Honours in geography, class III, 1961
Longley, Derek, B.A., with Honours in geography, class II(ii), 1961
Michael, B.Sc., with Honours in electrical engineering, class II(ii), 1963
Longman, Martin Raymond, B.Sc., 1964
Longworth, Eric George, B.Sc., 1964
Lonsdale, Janet Sylvia, B.A., in special studies (history), 1961
Loomes, Brian Robert, B.A., in general studies, 1962
Kenneth Wilfred, LL.B., with Honours, class III, 1963
Lord, Anne Catherine, LL.B., with Honours, class II(ii), 1964
Juliet Edith, B.Sc., with Honours in general studies, class II(ii), 1963
Losowsky, Monty Seymour, M.B., Ch.B., with Honours, class II, 1955; M.D. (*in absentia*), 1961
Lovell, Ann, B.A., with Honours in philosophy and English literature, class II(i), 1963

Lovell, Patrick Anthony, LL.B., with Honours, class I, 1961
Peter John, B.Sc., with Honours in chemical engineering, class II(ii), 1962
Lovie, Alexander Deville, B.A., with Honours in psychology, class I, 1961
Lowe, David Andrew, B.Sc., with Honours in civil engineering, class II(ii), 1964
Elizabeth Esme Anne, B.Sc., with Honours in general studies, class II(i), 1962
John David, B.A., with Honours in philosophy, class II(i), 1964
John Keith, B.A., with Honours in modern languages, class II(ii), 1961
Keith William, B.Sc., with Honours in mechanical engineering, class II(i), 1962
Kenneth, B.Sc., with Honours in mathematics, class III, 1963
Phillip Anthony, B.A., with Honours in economics, class II(ii), 1961
Lowerson, John Ridley, B.A., with Honours in history, class II(i), 1962
Lowry, David Roger, B.Sc., with Honours in physics, class III, 1964
Loxley, John, B.A., with Honours in economics, class II(i), 1963
Loxton, John Philip, B.Sc., in general studies, 1963
Lucas, Clive, B.Sc., with Honours in chemistry, class III, 1961
Doreen Mary, B.A., with Honours in English, class II(ii), 1964
Paul Graham, B.Sc., with Honours in electrical engineering, class II(ii), 1962
Pauline Mary, B.A., in special studies (geography), 1964
Roger, B.A., with Honours in economics, class III, 1961
Trudi Anne, B.A., with Honours in general studies, class II(i), 1964
Luckett, Michael Anthony, B.Sc., in special studies (physics), 1964
Ludley, John Harwood, B.Sc., with Honours in civil engineering, class I, 1956; Ph.D., 1960
Ludlow, William Warwick, B.Sc., 1960; with Honours in textile industries, class III, 1962
Lunn, Lilian Elizabeth, B.Sc., 1964
Lupin, Michael Sidney, B.Sc., with Honours in chemistry, class II(i), 1962
Lurie, Richard Stewart, M.B., Ch.B., 1964
Luxmoore, Anthony Roger, B.Sc., with Honours in physics, class II(ii), 1959; M.Sc., 1963
Luxton, Kathleen Margaret, B.A., in special studies (history), 1964
Lycett, Gary, LL.B., with Honours, class II(ii), 1962
Lydon, John Ennis, B.Sc., with Honours in chemistry, class II(ii), 1961
Lye, Sang Fong, B.Sc., 1964
Lynch, Bernard Michael, B.Sc., with Honours in mechanical engineering, class II(ii), 1964
Gerard Thomas, B.A., with Honours in English, class II(i), 1962
Mrs. Juliet Elizabeth, B.A., with Honours in English, class II(ii), 1962
Neil, B.A., with Honours in general studies, class II(ii), 1962
Lyne, Derek, B.A., with Honours in economics, class III, 1962
Lyon, Robert Barry, B.Sc., with Honours in chemical engineering, class II(i), 1964
Lyons, Geoffrey, B.A., with Honours in sociology with philosophy, class II(ii), 1959; M.A. (*in absentia*), 1963
Lyth, Sylvia Elaine, M.B., Ch.B., 1960

Maas, Caroline Ilse, B.A., with Honours in English, class II(ii), 1964
McArthur, Brian George, B.A., with Honours in English, class III, 1961
McCann, Anthony Paul, B.Sc., with Honours in chemistry, class I, 1956; Ph.D., 1961
John, B.Sc., with Honours in metallurgy, class III, 1961
McCartney, John Keith, B.Sc., 1961
Keith, B.Sc., 1964
McClorry, Brian Bimson, B.Sc., with Honours in civil engineering, class II(ii), 1961
McCollough, Ian Shearsmith, B.Sc., with Honours in chemistry, class III, 1964
McCombe, Terence Michael Jackson, B.Sc., in special studies (chemistry), 1964
McConville, Lionel Gerard, B.A., in special studies (French), 1961
McCulloch, Jean Nancy, B.A., with Honours in English, class III, 1964
McDermott, Catherine Mary, B.Sc., with Honours in psychology, class II(ii), 1964
Michael, B.Sc., 1961
Michael John, B.Sc., with Honours in physics, class II(i), 1962
McDonagh, Veronica, B.A., with Honours in general studies, class III, 1961
McDonald, Christopher Paul, B.Sc., 1964

MacDonnell, Julia, B.Sc., 1964
McDougald, Margaret, B.Sc., with Honours in physics, class II(i), 1962
McEwen, Heather, B.A., in special studies (theology), 1964
MacFarlane, Christine Mary, B.A., with Honours in general studies, class III, 1964
Robert, B.A., with Honours in general studies, class III, 1961
McGaffigan, Brian John, B.Sc., with Honours in civil engineering, class II(i), 1962
McGauran, Brian, B.A., with Honours in general studies, class II(ii), 1964
McGarrigle, Terence John, B.A., with Honours in German, class III, 1964
McGinty, Kathryn, B.A., in special studies (Russian), 1961
McGovern, Peter, B.Sc. (agricultural studies), 1962
MacGregor, Gillian Elisabeth, B.A., with Honours in history, class II(ii), 1963
Machin, David, B.Sc., with Honours in general studies, class I, 1961
Derek, B.Sc., with Honours in mechanical engineering, class III, 1962
McHugh, Barry James, B.A., with Honours in general studies, class II(ii), 1962
Terence James, B.A., with Honours in economics, class III, 1962
Macintosh, John Angus Wolfe, B.Sc., 1960
McKay, John, B.A., in special studies (French), 1961
McKechnie, Robert Ian, LL.B., with Honours, class II(ii), 1961
McKellow, Edwin Harry, B.A., with Honours in French, class II(i), 1954; M.A., 1961
McKelvie, Donald, Ph.D., 1963
McKeon, Thomas Michael, B.Sc., with Honours in chemical engineering, class I, 1961
Macildowie, Douglas Malcolm, B.A., with Honours in English, class II(ii), 1964
Mackenzie, John Pollard, B.Sc., in special studies (chemistry), 1964
Mackey, Robert Douglas, Ph.D., 1963
Mackintosh, Robert Ian Llewellyn, B.Sc., with Honours in electrical engineering, class III, 1963
Mackley, Brian, B.Sc., with Honours in mining, class II(i), 1964
Mackwood, Francis, B.A., with Honours in textile design, class III, 1962
McLean, Donald William, B.Sc., 1962
McLeish, John, Ph.D., 1964
McLellan, Rex Booker, Ph.D., 1962
McLusky, Andrew Robert, B.Sc., 1964
McMellan, Marian, B.A., with Honours in English, class II(ii), 1962
McMellin, Graham Fearon, B.Sc., with Honours in civil engineering, class II(ii), 1962
McMillan, Robert Alexander, B.A,. with Honours in history, class II(ii), 1963
McMullen, Ian Geoffrey, B.Sc., with Honours in textile chemistry, class III, 1962
McNair, Hugh, B.Sc., in general studies, 1961
McNamara, Aidan Benedict, Ph.D. (*in absentia*), 1962
Anne-Marie Margaret, B.A., with Honours in psychology, class II(ii), 1961
McQueen, Robert Stewart, M.Sc., 1963
Macpherson, Thomas Michael, B.Sc., with Honours in fuel science, class II(i), 1964
McTear, Graham, B.A., with Honours in history, class II(i), 1962
Madden, Charles Michael, B.A., in special studies (economics), 1964
Vincent John, B.Sc., with Honours in physics, class III, 1963
Madders, Rosemary Margaret, B.A., with Honours in economics, class II(ii), 1961
Maden, John, B.Sc., with Honours in chemical engineering, class III, 1964
Margaret Moira Carol, B.A., with Honours in geography, class II(ii), 1961
Madu, Athanasius Chukwunenye, B.Sc., 1964
Magee, Janet Elfrida Frances, B.A., with Honours in English, class II(ii), 1962
Magni, Gianni, B.Com. (*in absentia*), 1962
Mahandru, Ramesh Chander, B.Sc., 1963
Maher, Ann Winifred, B.A., with Honours in French, class II(ii), 1963
Mahmud, Kamal Raji, B.Sc., 1962
Mahon, Patricia, B.Sc., in general studies, 1963
Mahoney, Terence John, B.A., with Honours in psychology and sociology, class II(i), 1963
Main, Alec Barry, B.A., with Honours in English, class II(i), 1964
Maines, Trevor, B.Sc., 1963

Major, Peter Graham, B.Sc., with Honours in pharmacy, class III, 1964
Majumdar, Nripendra Narayan, Ph.D., 1963
Makin, William George, B.Sc., with Honours in agricultural studies, class II(i), 1963
Makris, Athanasios Kleonos, B.A., with Honours in textile management, class III, 1964
Malhotra, Lila Mabel, M.B., Ch.B., 1961
Mallett, David John, B.Sc., with Honours in mining, class II(ii), 1963
Mallick, Joan, B.A., with Honours in classics, class II(ii), 1961
Mallinson, Michael Arnold, B.Com, with Honours, class II(ii), 1964
Mallpress, Ernest Phillip, B.A., 1950; M.Ed., 1961
Malone, Andrew William, B.Sc., with Honours in civil engineering, class II(ii), 1964
Maltby, Geoffrey, B.A., in general studies, 1962
Janet Elizabeth, B.A., with Honours in general studies, class II(ii), 1961
Manchanda, Davika, B.A., in special studies (English) (*in absentia*), 1961
Mann, Sheila Mary, B.A., with Honours in sociology, class II(ii), 1964
Mannall, James Richard, B.Sc., with Honours in mechanical engineering, class III, 1964
Manning, Alan Howard, B.Sc., 1964
John Thomas, Ph.D., 1962
Manock, Colin Henry, M.B., Ch.B., 1962
Mansfield, Keith, B.Sc., with Honours in general studies, class III, 1961
Juliet Barbara, B.A., with Honours in French, class III, 1961
Terence, B.Sc., with Honours in chemistry, class II(ii), 1961
Manson, Julius David, B.Ch.D., 1947; M.Ch.D., 1963
Manuell, Anthony Charles, B.Sc., with Honours in chemical engineering, class III, 1963
Mrs. (see Gilchrist, Anne)
Manville, Peter, B.Sc., with Honours in physics, class II(i), 1962
March, Christopher Nelson, B.Sc., with Honours in mechanical engineering, class II(i), 1961
Markho, Putrus Hurmiz, B.Sc., with Honours in mechanical engineering, class III, 1961
Marks, Lynda Bernette, B.A., with Honours in history, class II(ii), 1961
Raymond Lawrence, M.B., Ch.B., 1961
Marland, David Neil, B.Sc., with Honours in chemistry, class II(ii), 1961
Marples, Brian Arthur, B.Sc., with Honours in chemistry, class I, 1958; Ph.D., 1961
Marr, David Nicholas, B.Sc., with Honours in mining, class II(ii), 1964
Peter Donald St. John, B.A., with Honours in theology, class I, 1964
Marriott, David John, B.Sc., with Honours in general studies, class II(ii), 1963
Marsden, Barbara, B.A., with Honours in history, class II(ii), 1964
Philip Geoffrey Keith, B.Sc., with Honours in physics, class II(ii), 1964
Brian Sutcliffe, B.A. with Honours in geography, class I, 1959; M.A., 1961
Tim, B.Sc., with Honours in civil engineering, class II(ii), 1963
Marsh, Maxwell Clive, B.Sc., with Honours in mathematics, class I, 1964
Marshall, Alexander John, B.Sc., with Honours in physics, class II(ii), 1963
David Alan, B.Sc., with Honours in civil engineering, class III, 1963
Ian Clive, B.Sc., with Honours in colour chemistry, class III, 1962
James, B.Sc., with Honours in physics, class II(i), 1963
John Alan, B.Sc., with Honours in civil engineering, class III, 1963
Joyce Marie, B.Sc., with Honours in mathematics, class III, 1964
Kenneth, B.Sc., with Honours in metallurgy, class II(ii), 1964
Robert Cunningham, B.A., with Honours in general studies, class II(ii), 1962
Robert Sidney, B.Sc., 1964
Stuart William, B.A., with Honours in general studies, class III, 1961
Marsland, Ian, B.A., with Honours in economic history and geography, class III, 1964
Marson, Peter John, B.A., with Honours in German, class II(i), 1964
Marston, Mrs. Patricia, B.A., with Honours in history, class III, 1963
Martin, Anthony John, B.Sc., 1962
Christine Ursula, B.A., with Honours in history, class II(ii), 1964
Colin Frank, B.A., with Honours in German, class III, 1961
George Christopher James, B.Sc., with Honours in chemistry, class II(i), 1961
Helen Patricia, B.A., with Honours in general studies, class III, 1964

Martin, Michael John, B.Sc., in special studies (chemistry), 1961
Michael John, B.Sc., with Honours in electrical engineering, class I, 1963
Pauline, B.A., with Honours in English and history, class III, 1963
Pearl Shirley, B.A., with Honours in Latin, class III, 1964
Peter Harland, B.Sc., with Honours in general studies, class III, 1964
Royston Harold, B.Sc., with Honours in physics, class II(ii), 1964
Stanley, B.Sc., with Honours in chemistry, class II(i), 1961
Stella Monica, B.A., with Honours in Russian, class II(ii), 1964
Martindale, Peter Richard, B.Sc., with Honours in mechanical engineering, class I, 1962
Martland, Diana Margaret, B.A., with Honours in geography and history, class II(ii), 1964
Marwood, Joanna Patricia, B.A., in special studies (sociology), 1962
Maskell, Daphne Valerie, B.A., with Honours in music, class II(i), 1964
Mason, Harold, B.A., with Honours in theology, class II(ii), 1957; M.A., 1961
Hazel Vera, M.B., Ch.B., 1964
James Edward, B.Sc., 1962
Michael Christopher, B.Sc., with Honours in anatomy, class II(i), 1961
Peter John, B.A., with Honours in economics, class III, 1963
Roger Stuttard, B.Sc., with Honours in chemical engineering, class II(i), 1961
Massam, Margaret Ann, B.Sc., with Honours in general studies, class II(ii), 1962
Massey, Geoffrey, B.A., with Honours in geography, class II(ii), 1961
Mast, Rolf Detlef, B.Sc., with Honours in chemistry, class II(i), 1963
Mather, David Lawrence, B.Sc., 1961
Mathison, Margaret Elaine, M.B., Ch.B., 1963
Mattey, Michael, B.Sc., with Honours in biochemistry, class II(ii), 1964
Matthews, Barry, B.A., with Honours in geography, class II(i), 1958; M.A. (*in absentia*), 1960
David Lawton, M.B.,Ch.B., 1960
Ian, B.Sc., with Honours in zoology, class II(ii), 1964
Patricia Anne, B.A., with Honours in French, class II(i), 1961
Peter Sidney, B.Sc., 1961
Stanley, B.Sc., with Honours in agricultural botany, class II(i), 1963
Maude, Christopher William, B.Sc., 1961
Gregory, B.Sc., with Honours in mining, class II(ii), 1961
Herbert Derrik, B.Sc., with Honours in geography, class II(ii), 1961
Maudsley, David Roy, B.Sc., 1961
Maughan, Robert, B.Sc., 1964
Maw, Joan Edith Mary, B.A., with Honours in English, class I, 1962
Mawson, Geoffrey, B.Sc., with Honours in agricultural bacteriology, class II(i), 1961
Maxfield, Barbara Mary, B.A., with Honours in economic history and geography, class II(ii), 1963
May, Cedric Roger Paul, B.A., with Honours in French, class I, 1957; M.A., 1960
Ruth, B.A., with Honours in sociology, class II(i), 1963
Timothy Claude, B.A., with Honours in sociology, class II(ii), 1962
Mayall, Geoffrey, M.Ed., 1961
Mayers, David Geoffrey, B.A., with Honours in English, class II(ii), 1964
Mayfield, Robert Michael, B.A., with Honours in English, class II(ii), 1962
Meachem, Edith Joan, B.Sc., with Honours in mathematics, class III, 1963
Meanley, Christopher, B.Sc., 1964
Mearns, Peter Stanley, B.Sc., with Honours in physics, class I, 1963
Measures, Michael John, LL.B., with Honours, class III, 1962
Medley, John Albert, Ph.D., 1962
Mee, David Martin, B.Mus., 1962
Melia, Terence Patrick, Ph.D., 1961
Melliar-Smith, Sara Elizabeth, B.A., with Honours in Italian, class II(ii), 1964
Mellor, Claude Michael, B.A., with Honours in history, class II(i), 1961; M.A., 1963
Christopher Paul, B.Ch.D., 1964
Leslie, B.Sc., with Honours in fuel science, class I, 1964
Robert Michael, B.Sc., with Honours in chemistry, class III, 1964

Mellors, Alan Richard, B.Sc., with Honours in civil engineering, class II(i), 1963
David, B.Sc., with Honours in electrical engineering, class III, 1964
Meltzer, Alan Sydney, M.B., Ch.B., 1960
Mencher, Jennifer Barbara, M.B., Ch.B., 1960
Menezes, Armando Rodolfo, M.B., Ch.B., 1963
Joseph Salvadore, B.A., with Honours in English, class III, 1963
Mepsted, Leonard Charles, B.A., with Honours in general studies, class II(i), 1961
Merlin, Michael John, M.B., Ch.B., 1962
Nigel Bruce, B.Sc., with Honours in chemistry, class II(ii), 1960; Ph.D., 1964
Merrells, Bruce, B.A., with Honours in geography, class II(i), 1964
Merrill, Susan, B.A., in special studies (French), 1961
Merriman, David Richard, B.Sc., in special studies (chemistry), 1963
Merritt, John Keith, M.B., Ch.B., 1961
Merry, Diana Mary, B.A., with Honours in sociology, class II(ii), 1963
Metcalfe, Bryan, M.A., 1961
David William, B.Sc., with Honours in physics, class II(ii), 1961
William Anthony, B.Sc., with Honours in agriculture, class II(i), 1964
Metwally, Mokhtar Mohamed, M.A., 1962
Mews, Stuart Paul, B.A., with Honours in theology, class II(i), 1964
Meyrick, John Anthony, B.A., with Honours in English, class II(i), 1964
Michael, Duncan, Ph.D., 1963
Peter Robert, B.Sc., with Honours in general studies, class III, 1963
Mickleburgh, David Robert, B.Sc., with Honours in electrical engineering, class III, 1961
Mickler, Peter Allan, B.A., with Honours in economics and politics, class II(ii), 1964
Micklethwaite, John Dale, B.A., with Honours in geography, class II(i), 1962
Middleton, Ian Henry Berney, LL.B., with Honours, class II(ii), 1962
Miles, David Edward, B.Sc., with Honours in metallurgy, class II(i), 1963
David William, M.B., Ch.B., 1960
Frederick Albert, B.Sc., with Honours in physiology, class I, 1962
Julian Fielden, B.Sc., with Honours in civil engineering, class II(i), 1963
Malcolm George, B.Sc., with Honours in chemistry, class II(i), 1962
Roy, B.Sc., with Honours in colour chemistry, class II, 1959; Ph.D., 1962
Miller, Kenneth Richard, B.Sc., with Honours in civil engineering class II(ii), 1963
Michael John, B.A., with Honours in general studies, class II(i), 1963
Pauline Anne, B.Sc., with Honours in physics, class II(ii), 1963
Peter Clifford, B.Sc., with Honours in physics, class II(i), 1961
Rita, B.A., with Honours in general studies, class III, 1964
Roger Scott, B.Sc., with Honours in agriculture, class III, 1964
Millerchip, David John Roger, B.Sc. (agriculture), 1964
Millgate, Mrs. (see Barr, Eunice Jane), M.A., 1963
Millington, Valerie, B.A., with Honours in history, class III, 1961
Mills, Alan Keith, B.A., with Honours in economics, class III, 1961
David Antony, B.Sc., with Honours in the chemistry of leather manufacture, class III, 1962
Derek Forbes, B.Sc., 1962
Gordon, B.Sc., with Honours in psychology, class III, 1964
John Thomas, B.Ch.D., 1962
Margaret Christine, B.A., in general studies, 1961
Nicholas John, B.Sc., with Honours in electrical engineering, class III, 1964
Norman, B.Sc., with Honours in mathematics, class I, 1962
Susan Ann, B.A., in special studies (German), 1962
Millward, David Stanley, B.A., with Honours in English, class II(ii), 1963
Irene Marion, B.A., with Honours in sociology, class III, 1962
Michael Lloyd, B.A., with Honours in music, class II(ii), 1964
Milner, Alan, LL.B., with Honours, class I, 1956; Ph.D., 1961
John Richard, B.A., with Honours in general studies, class II(ii), 1962
John Roger, B.A., with Honours in sociology, class III, 1961
Patrick Daniel Russell, LL.B., with Honours, class III, 1964

Miloszewski, Krzysztof, B.Sc., with Honours in physiology, class II(i), 1961; M.B., Ch.B., with Honours, class II, 1963
Minifie, Robert Michael, B.Sc., with Honours in civil engineering, class II(ii), 1964
Minnis, Ernest William, B.Sc., with Honours in mechanical engineering, class III, 1964
Minshull, Marjorie, B.A., with Honours in French, class II(ii), 1962
Minson, Roger Graham, B.A., with Honours in general studies, class III, 1964
Minter, Gordon Geoffrey, B.A., with Honours in Spanish, class II(i), 1962
Mitchell, David John, B.Sc., 1964
Geraldine, B.A., with Honours in general studies, class II(ii), 1964
John, B.Sc. (agricultural studies), 1962
John, LL.B., with Honours, class II(ii), 1964
Margaret Mary, B.A., with Honours in French, class II(ii), 1963
Peter Kenneth, B.A., with Honours in economics and history, class II(ii), 1963
Richard Graham, B.A., with Honours in geography, class II(ii), 1964
Mitton, Ian Donald, B.Sc., 1961
Mizrahi, Joseph, B.Sc., 1963
Moate, Richard Philip, B.Sc., with Honours in physics, class II(ii), 1962
Mobbs, Patricia, B.A., in special studies (French), 1962
Mogridge, Michael Charles, B.Sc., with Honours in civil engineering, class II(i), 1960; M.Sc., 1962
Moll, Edward Francis Henderson, M.B., Ch.B., 1961
Molloy, David Anthony, B.Sc., 1962
Molyneux, Geoffrey, B.A., with Honours in geography, class II(ii), 1964
Monies, David Grant, B.Ch.D., 1963
Monkman, Lewis James, Ph.D., 1961
Montador, John Douglas, B.Sc., in general studies, 1961
Montague, Jeffrey William, B.Sc., with Honours in metallurgy, class II(ii), 1964
Montserrat, Edward Leason, B.Sc., with Honours in mechanical engineering, class II(ii), 1963
Moody, Christopher, B.A., with Honours in Russian, class II(i), 1960; M.A., 1962
Derek Elstone, B.Sc., with Honours in physics, class I, 1954; Ph.D., 1960
Eric John, B.Sc., with Honours in mining, class III, 1964
Moon, John Edward, B.Sc., in general studies, 1960
Malcolm Wilson, B.Sc., with Honours in chemistry, class I, 1959; Ph.D. (*in absentia*), 1962
Moore, Anna Gael, B.A., in special studies (sociology) (*aegrotat*), 1964
David Cameron, LL.B., (*aegrotat*), 1963
Judith (Mrs. Whitworth), B.A., in general studies, 1964
Michael David, M.B., Ch.B., 1961
Robert William, B.Sc., with Honours in biochemistry, class II(i), 1963
Ronald Henry, B.A., with Honours in French, class II(ii), 1964
Valerie, B.A., with Honours in history, class II(i), 1963
Moorhouse, Elisabeth Susan, B.Sc., with Honours in general studies, class II(ii), 1961
Mooten, Kistnen, B.A., with Honours in general studies, class II(ii), 1964
Patricia, B.A., with Honours in psychology and sociology, class II(ii), 1964
Moran, Vincent, B.Sc., with Honours in chemical engineering, class II(ii), 1961
Morgan, Edgar John, B.Sc., 1964
Gillian, B.A., with Honours in French, class I, 1964
Humphrey Clifford, B.A., 1947; M.A., 1956; M.Ed., 1964
John Barry, B.Sc., 1964
Valerie Joan, B.Sc., with Honours in general studies, class III, 1962
Moriarty, John, B.A., with Honours in general studies, class II(ii), 1962
Morland, Ruth, B.A., with Honours in English, class II(ii), 1964
Morley, Michael John, B.Sc., in special studies (physics), 1962
Richard, B.Sc., with Honours in general studies, class II(ii), 1963
Trevor Wilfred, B.A., with Honours in French, class II(ii), 1964
Morrell, Alan Paylor, B.Sc., with Honours in metallurgy, class II(i), 1963
Morris, Anthony, M.Sc., 1964

Morris, Brian Arthur, B.Sc., with Honours in agricultural chemistry, class II(ii), 1963
Geoffrey, B.A., with Honours in French, class II(i), 1964
John B.A., with Honours in Spanish, class II(i), 1957; Ph.D., 1961
Judith Mary, B.A., with Honours in English, class II(ii), 1962
Michael James, B.Sc., with Honours in mathematics, class I, 1964
Michael John, B.Sc., with Honours in civil engineering, class III, 1962
Peter David, B.A., with Honours in modern languages, class II(ii), 1961
Thomas Andrew, B.Sc., with Honours in chemistry, class II(ii), 1963
Morrison, George Eric, B.Sc., with Honours in physics, class III, 1964
Ian Leslie, B.Sc., with Honours in psychology, class III, 1964
Morrow, Norman Robert, B.Sc., with Honours in chemical engineering, class III, 1959; Ph.D., 1962
Mortimer, John David, B.Sc., 1964
John Emile Peter, B.Sc., 1962
Michael John, B.A., with Honours in geography, class II(i), 1960; M.A., 1963
Roger Greaves, B.Ch.D., 1963
Mortlock, Hilary Ann, B.A., with Honours in French, class III, 1961
Morton, Carola Mary, B.A., with Honours in textile design, class II(ii), 1962
Clive Neil, B.Sc., with Honours in civil engineering, class II(ii), 1964
John, B.Sc., with Honours in mechanical engineering, class III, 1963
Malcolm Peter, B.A., with Honours in geography, class II(i), 1961
Mosley, Cynthia, B.A., with Honours in German, class II(ii), 1962
Grace Helen Joyce, B.Sc., in special studies (mathematics), 1962
Michael David, B.A., in special studies (economics), 1962
Moss, George William, B.Sc., 1962
Michael Robert, B.Sc., with Honours in geography, class II(i), 1963
Trevor, B.Sc., 1962
Mossanen, Ayoob, M.B., Ch.B., 1963
Diane Rosemarie, B.Ch.D., 1964
Most, Phyllis Anne, B.Sc., with Honours in physiology, class I, 1962
Mostratos, Ann, M.Sc., 1963
Mothersdale, George Kenneth, B.Sc., with Honours in textile chemistry, class I, 1962
Motlow, William David, B.A., with Honours in history, class III, 1964
Mott, Mary Frances, B.A., with Honours in general studies, class III, 1961
Mottahed, Parviz, B.Sc., 1964
Mottershaw, Jon Howard, B.A., with Honours in geography, class III, 1960
Moulson, David John, B.Sc., with Honours in physics, class I, 1963
Moult, Roger Harvey, B.Sc., with Honours in physics, class III, 1961
Moulton, Sylvia Jane, B.A., with Honours in German, class II(i), 1964
Mountford, Philip Roland, B.Sc., with Honours in general studies, class III, 1964
Moxham, William, B.Sc., with Honours in general studies, class I, 1961
Mude, Gerald Vincent, B.Ch.D., 1964
Muhammad Ali, Ghassan Abdul Jalil, B.Sc., with Honours in electrical engineering, class II(ii), 1962
Muir, Stanley Earl, M.Sc. (*in absentia*), 1964
Thompson, B.A., with Honours in economics, class II(i), 1962
Mukherjee, Subimal Chandra, M.A., 1964
Mulchandani, Ram Kishinchand, Ph.D., 1961
Mullenger, Leonard, B.Sc., with Honours in general studies, class II(i), 1964
Mulligan, David George, B.A., with Honours in general studies, class II(ii), 1961
Mullins, Anthea Rosamond, B.A., with Honours in history, class II(i), 1964
Patricia Mary, B.A., with Honours in history, class II(ii), 1963
Munro, Neil, B.Sc., with Honours in civil engineering, class III, 1961
Robert, B.A., with Honours in general studies, class III, 1962
Munshi, Muhammad Umar, M.Sc., 1964
Munton Brian Robert, B.Sc., with Honours in civil engineering, class I, 1964
Richard, B.Sc., with Honours in general studies, class II(ii), 1963
Murphy, David Alan, B.Sc. (agricultural studies), 1963

Murphy, Michael Edward Joseph, B.A., with Honours in history, class II(i), 1962
Michael Thomas, B.A., with Honours in geography, class II(i), 1961
Murray, John Frederick, B.Sc., 1963
Pamela, B.A., with Honours in general studies, class II(i), 1962
William, B.Com., with Honours, class II(ii), 1964
Murtagh, Mary Virginia Wrangham, M.B., Ch.B., 1960
Murthi, Kotturi Sreerama, Ph.D., 1962
Muther, Thomas Fred, Ph.D. (*in absentia*), 1963
Myers, Estelle, B.A., with Honours in sociology, class III, 1962
Peter Leslie, B.Sc., with Honours in chemistry, class I, 1964

Naftalin, Anthony Leslie, M.B., Ch.B., 1963
Nagpaul, Narinder Kumar, B.Sc., 1962
Naik, Prakash Virupax, M.Sc., 1962
Nainby, David, B.A., with Honours in geography, class II(i), 1963
Naipaul, Mira, B.A., in general studies, 1961
Napier, Valerie Anne, B.A., with Honours in English, class III, 1964
Nash, Christopher Graham, B.A., with Honours in economics with statistics, class II(ii), 1964
Colin Edward, Ph.D., 1962
Nathan, David Ian, B.Sc., with Honours in chemical engineering, class I, 1962
Naughton, Louis Plunket, M.Sc., 1963
Nauman, Edward Bruce, Ph.D. (*in absentia*), 1964
Naylor, Geoffrey Ronald, B.Sc., with Honours in geology, class II(ii), 1961
Neal, Christopher John, B.A., with Honours in general studies, class III, 1961
Needham, Michael James, B.A., with Honours in geography, class II(i), 1962
Neil, Elizabeth Anne, B.A., with Honours in geography, class III, 1964
Neilson, Richard Alvin, B.A., with Honours in geography, class I, 1958; M.A., 1961
Nelmes, Brenda Josephine, Ph.D., 1963
Nelson, William David, B.Sc., with Honours in chemical engineering, class III, 1962
Nesbitt, Jeremy Roger Noel, B.A., with Honours in English, class III, 1961
Nettl, Marietta Andrea, B.A., with Honours in sociology, class III, 1961
Nettleton, Brian, B.A., with Honours in sociology, class II(ii), 1961
Nettleton, John, B.Sc., in special studies (chemistry), 1964
Newbold, Martin Unett, B.Sc., in general studies, 1961
William Charles, B.A., with Honours in general studies, class II(ii), 1964
Newbould, William Frank, B.Sc., with Honours in physics, class II(i), 1962
Newbury, Carol Jane, B.A., in combined studies (psychology and sociology), 1964
Nolan Thomas Francis, B.Sc., with Honours in general studies, class III, 1962
Newby, Olive Mary, B.A., with Honours in Latin, class I, 1964
Newcombe, Michael John, B.Sc., 1964
Newham, Peter Anthony, LL.B., with Honours, class II(i), 1964
Newhill, John Henry, B.A., in special studies (textile management), 1963
Newman, Angela Heather, B.A., with Honours in French, class II(ii), 1964
Arthur Terence, B.Sc., with Honours in civil engineering, class II(i), 1964
Newson, Keith William, B.Sc., with Honours in electrical engineering, class III, 1961
Newton, Jadwiga Anne Teresa, LL.B., with Honours, class II(ii), 1963
James, B.A., with Honours in French, class III, 1963
Lucy Joy, B.A., with Honours in French, class II(i), 1961
Neil, B.A., with Honours in economics, class II(i), 1964
Mrs. Patricia Helen, B.A., with Honours in French, class II(ii), 1963
Nicholls, Anne, B.Sc., with Honours in geography, class III, 1963
Nicholson, Bruce, B.Sc. (*aegrotat*), 1964
Joan, B.A., with Honours in theology, class I, 1964
John Keith, B.Sc., with Honours in chemistry, class II(ii), 1962
Patrick Stephen, B.Sc., with Honours in ceramics, class II(i), 1963

Nickson, Anne, B.A., in special studies (German), 1964
Nicol, David Stuart, B.Sc., (agriculture), 1964
Nield, Anthea Cecilia, B.A., with Honours in French, class II(i), 1961
Keith Harry, B.A., with Honours in history, class II(i), 1964
William Barry, B.Sc., with Honours in civil engineering, class II(ii), 1963
Nixon, Peter Hargreaves, B.Sc., with Honours in geology, class II(i), 1957; Ph.D. (*in absentia*), 1961
Rosalind Parkinson, B.Com., 1961
Valerie Helen, B.A., with Honours in general studies, class II(ii), 1964
William David, B.A., with Honours in general studies, class II(i), 1964
Nixson, Frederick Ian, B.A., with Honours in economics, class II(i), 1964
Noble, Barrie, B.A., in special studies (economics), 1962
Mary Carol, B.A., with Honours in English, class II(ii), 1964
Shelagh Mary, B.A., in special studies (English), 1961
Nockles, Anthony Victor, B.Sc., 1962
Nokes, Kenneth George Sydney, B.Sc., 1963
Noon, Valerie Margaret, B.A., with Honours in theology, class III, 1964
Noone, Michael John, B.Sc., with Honours in ceramics, class II(i), 1963
Noot, Ivor James, B.A., with Honours in general studies, class II(ii), 1963
Nordby, Hans Arne, B.Sc., 1964
Norgrove, Sheila Jane, B.A., with Honours in geography, class II(ii), 1964
Norman, John Richard, B.Sc., with Honours in ceramics, class II(i), 1962
Norris, Clive Anthony, B.Sc., with Honours in physics, class II(i), 1964
North, Ronald Berridge, B.Sc., with Honours in chemistry, class III, 1962
Northover, Thomas Clive Selwyn, B.Sc., with Honours in mechanical engineering, class III, 1964
Northrop, Ian Thomas, B.Sc., with Honours in metallurgy, class II(i), 1961
Norton, Kenneth, B.Sc., with Honours in chemistry, class II(i), 1963
Nott, James Arthur, Ph.D., 1963
Nouri, Mehdi, B.Sc., with Honours in electrical engineering, class III, 1964
Nowell, David Grahame, B.Sc., 1961
Nunweek, Brian, B.Sc., with Honours in chemistry, class II(ii), 1963
Nussey, Clive, B.Sc., with Honours in chemical engineering, class II(i), 1964
Nutt, Anne Caroline, LL.B., with Honours, class II(i), 1961
Nuttall, Bernice, B.A., with Honours in French, class II(i), 1963
Ronald Charles, B.Sc., 1963
Nwankwo, Clement Onyeguili, LL.B., 1961
Nweke, Patrick Chukwuemeka, M.B., Ch.B., 1963
Nwizugbo, Vincent Amobi, LL.B., 1961

Oades, John Malcolm, B.Sc., with Honours in agricultural chemistry, class II(i), 1959; Ph.D., 1962
Oakes, Andrew Christopher, LL.B., with Honours, class II(ii), 1964
Oakland, John Gordon, B.A., with Honours in English, class II(ii), 1963
Michael James, B.Sc., with Honours in electrical engineering, class II(i), 1963
Oakley, David, B.Sc., with Honours in physics, class III, 1963
Oatley, Geoffrey Edward, B.Sc., with Honours in gas engineering, class I, 1959; M.Sc., 1961
Obafemi, Olabisi Adunola, B.A., with Honours in general studies, class II(ii), 1961
O'Brien, Mary Louisa, B.Sc., with Honours in general studies, class I, 1961
O'Donnell, James Hamilton, Ph.D. (*in absentia*), 1963
Mrs. (see also Gregory, Stella Rayner) Ph.D. (*in absentia*), 1964
O'Driscoll, Michael, M.B., Ch.B., 1962
Ofori Atta, Reginald Andrew Boakye, LL.B., with Honours, class III, 1961
Ogden, Anne, B.A., with Honours in general studies, class III, 1964
Ogilvie, Eric, M.Ed., with distinction, 1961

Ogle, Christopher John, B.Sc., with Honours in chemistry, class II(ii), 1961; M.Sc., 1963
Ognall, Michael John, M.B., Ch.B., 1960
O'Gorman, Francis, B.A., with Honours in history, class II(i), 1962
O'Hare, Mary Philomena, B.A., with Honours in geography, class II(i), 1962
Okegbenro, Benjamin Abolade, LL.B., with Honours, class II(ii), 1963
Okereke, Silas Akwaeke, B.A., in special studies (economics), 1961
Okoronkwo, Joseph Obinali, B.A., with Honours in economics and history, class III, 1963
Oladimeji, Olatunji Oladapo, B.Sc., 1964
Oldfield, Patrick Elliott, B.A., in general studies, 1963
Ralph Herbert, B.A., with Honours in history, class II(i), 1963
Roger Harold, B.Sc., with Honours in civil engineering, class III, 1963
Oldknow, Antony, B.A., with Honours in English, class II(ii), 1961
Oliver, Alan Robert, B.Sc., with Honours in the chemistry of leather manufacture, class II(ii), 1962
Frances Hilary, B.A., with Honours in history, class II(ii), 1962
Margaret Helen Spence, B.A., with Honours in history, class III, 1962
Olsen, Thomas Frederick Morrell, B.A., with Honours in economic history and geography, class II(i), 1964
Olver, Arthur David, B.Sc., with Honours in electrical engineering, class I, 1963
Omaboe, Paul Narku-Ayidan, LL.B., 1963
Omolayo, Michael Olajide, B.A., with Honours in economics and history, class II(ii), 1963
O'Neill, Bernard, B.A., with Honours in theology, class II(i), 1961
Paula Thérèse, B.A., with Honours in history, class II(ii), 1962
Oram, William Graham, B.Sc., with Honours in geology, class III, 1963
Orangun, Cornelius Oluwasade, Ph.D., 1963
O'Reilly, Francis Paul, B.A., with Honours in general studies, class III, 1961
Orgill, Elizabeth, B.A., with Honours in general studies, class III, 1962
Ormond, Christine Grace, B.A., with Honours in English, class III, 1963
Ormrod, William, LL.B., with Honours, class II(i), 1962
Orrell, David Harry, B.Sc., with Honours in civil engineering, class III, 1964
Orton, Dennis George, B.Sc., with Honours in colour chemistry, class III, 1957; Ph.D., 1960
Osborne, Christine Anne, B.Sc., with Honours in physics, class II(ii), 1963
David Ernest, B.Sc., with Honours in physics, class II(ii), 1961
Ian, B.A., with Honours in geography and sociology, class II(ii), 1964
O'Shea, Kevin Richard, B.Sc., with Honours in physics, class II(i), 1961
Osmanoglu, Tuncay, B.Sc., with Honours in textile engineering, class I, 1960; Ph.D., 1962
O'Toole, Roger Laurence, B.A., with Honours in sociology, class II(ii), 1963
Otten, Adrian John, B.Sc., 1962
Ottley, Carl Alan, B.Sc., with Honours in civil engineering, class II(ii), 1962
Otto, Brian, B.A., with Honours in general studies, class II(ii), 1961
Oughtibridge, David Brenan, M.B., Ch.B., 1961
Ould, Martin, B.Sc., with Honours in mining, class II(i), 1961
Outhwaite, Paul Nigel, B.A., with Honours in English, class II(i), 1964
Overton, Thomas Rumney, Ph.D., 1963
Owen, Mrs. Constance Mary, B.A., with Honours in sociology, class III, 1963
Juliet Esmé, B.A., with Honours in general studies, class II(ii), 1961
Malcolm Stewart, B.Sc., in special studies (mathematics), 1962
Martin Cyril, B.A., with Honours in English, class II(ii), 1962
Owens, Anthony, B.Sc., with Honours in physics, class II(i), 1963
Ownsworth, John Martin, B.Sc., with Honours in agricultural studies, class III, 1961
Oxtoby, Robert, B.Sc., with Honours in gas engineering, class I, 1961
Özel, Mehmet, B.Sc., with Honours in metallurgy, class III, 1964

Pacey, William Henry, B.Sc., 1963
Packman, Geoffrey Robert, B.A., with Honours in economics and history, class II(ii), 1963
Paddick, John Chester, B.Sc., with Honours in general studies, class II(ii), 1964

Padfield, Malcolm, B.Sc., 1964
Padwell, Malcolm Anthony, M.B., Ch.B., 1963
Page, Barrie George Nigel, Ph.D., 1961
John Ellett, B.Sc., with Honours in chemistry, class III, 1961
Michael, B.Sc., with Honours in general studies, class II(ii), 1961
Paige, Mrs. Sylvia Maureen, B.A., with Honours in sociology, class III, 1962
Paine, Angus John, B.Sc., 1963
Mrs. (see also Walsh, Christine), M.A., 1962
Painter, Edward Malcolm, B.Sc., with Honours in chemical engineering, class III, 1962
Ralph Bernard, B.Sc., with Honours in civil engineering, class II(i), 1964
Robin Anthony, B.Sc., with Honours in chemical engineering, class II(ii), 1964
Palk, John Derek, B.Sc., 1964
Palka, Jan Tadeusz, B.Sc., 1952; M.Sc., 1960
Palmer, Anthea Fiona Catherine, B.A., with Honours in general studies, class II(i), 1962
Peter Guy Rodney, B.Sc., 1963
Pamphilon, Janet Mary, B.A., with Honours in French, class II(i), 1962
Pandit, Bina, B.Sc., with Honours in general studies, class II(ii), 1964
Panter, Clive Hedley, B.Sc., in general studies, 1955; M.Sc., 1962
Pantling, Michael John, B.A., with Honours in history, class II(i), 1961
Panupong, Chira, B.Com., with Honours, class II(i), 1960
Papadopoulos, Michael Zacharia, B.Sc., 1961
Papazoglou, Matthew George, B.Sc., 1963
Theodore, B.Sc., 1955; M.Sc. (*in absentia*), 1961
Theodore Constantine, B.A., in special studies (textile design), 1962
Paraskos, Michael, B.Com., 1964
Parekh, Pravin Chandra, B.Sc., with Honours in electrical engineering, class II(ii), 1962
Parikh, Sunilkant Shantilal, B.Sc., with Honours in colour chemistry, class III, 1962
Surendra Bapalal, B.Sc., 1961
Park, Judith Edna, B.A., with Honours in general studies, class III, 1962
Rodney John, B.Ch.D., 1964
Parker, Brian, B.Sc., with Honours in metallurgy, class II(ii), 1961
Douglas, B.Sc., with Honours in chemistry, class II(ii), 1963
Edward Keith, B.Sc., with Honours in chemistry, class II(ii), 1963
John Martin, LL.B., with Honours, class II(ii), 1961
Judith Mary, B.Sc., with Honours in general studies, class II(i), 1964
Michael George, B.Sc., with Honours in colour chemistry, class II, 1959; Ph.D., 1962
Monique Susanne Miriam Müller, B.A., with Honours in geography, class III, 1961
Raymond Robert, B.Sc., 1963
Parkes, George Francis Henry, B.Sc., with Honours in general studies, class II(ii), 1964
Patricia Ann, B.A., with Honours in theology, class II(ii), 1962
Parkin, Geoffrey James Scott, B.Sc., with Honours in anatomy, class I, 1964
William, M.Sc., with distinction, 1963
Parkington, Brian William, B.A., with Honours in geography, class II(i), 1962
Parkins, Rachel Mary, B.Sc., with Honours in chemistry, class I, 1962
Parkinson, David, B.A., with Honours in history, class II(ii), 1962
David Brian, B.Sc., with Honours in physics, class II(i), 1961
Harold, LL.B., with Honours, class II(ii), 1962
Harry Robert, B.Sc., with Honours in general studies, class III, 1964
John Christopher, B.Sc., 1963
Mary Julie Gabrielle, B.A., with Honours in textile design, class I, 1961
Richard Anthony, B.Sc., with Honours in electrical engineering, class II(i), 1962
Terence Charles Redshaw, B.A., with Honours in English, class II(ii), 1961; M.A., 1963
Parnell, Winston Martin, B.A., with Honours in general studies, class II(ii), 1963
Paroo, Abdul Ismail, B.Com., with Honours, class III, 1964
Parr, Margaret Mary, B.A., with Honours in history, class II(ii), 1962
Parrott, George, B.A., with Honours in classics, class II(ii), 1961
Parry, Brian, B.A., with Honours in history, class II(i), 1961

Parry, David Osborne, B.Sc., in special studies (chemistry), 1962
Dilys Mary, B.Sc., with Honours in botany, class II(ii), 1964
John Michael, B.Sc., with Honours in civil engineering, class III, 1962
Parsai, Kurosh, B.Sc., with Honours in mining, class III, 1963
Parsison, Mary Wendy Rosalind, M.B., Ch.B., 1960
Parslow, Michael William, B.Sc., with Honours in chemistry, class II(ii), 1963
Parsons, Alexander John, B.Sc., 1963
Frank Maudsley, B.Sc., with Honours in physiology, class II, 1941; M.B., Ch.B., with Honours, class II, 1943; M.D., with distinction, 1961
Paul Donald, B.Sc., with Honours in metallurgy, class II(i), 1961
Partner, Peter, B.A., with Honours in history, class II(ii), 1961
Partridge, Anthony Edward, B.Sc., in special studies (chemistry), 1962
Pashley, Anthony, B.Sc., with Honours in mining, class II(ii), 1962
David Anthony, B.Sc., with Honours in chemical engineering, class III, 1961
Passler, John Franz Ernst, B.A., with Honours in geography, class II(ii), 1961
Patel, Bipinchandra Bhailalbhai, B.Sc., 1964
Dineshchandra Chandubhai, B.Sc., 1962
Sudhaker Bhailalbhai, B.Sc., with Honours in colour chemistry, class II(ii), 1962
Umedbhai Naranbhai, M.Sc. (*in absentia*), 1963
Paterson, David Caird, B.Sc., with Honours in physics, class II(ii), 1962
Patmore, Janet, B.A., with Honours in Latin, class III, 1963
Patterson, Brian David, B.Sc., with Honours in biochemistry, class II(i), 1961
Pattison, Ronald, M.Ed., 1964
Patton, Neville James, B.A., with Honours in English, class II(i), 1962
Peter Robin, B.A., with Honours in sociology, class III, 1961
Paul, Robert Thomas, M.B., Ch.B., 1963
Pawley, Stephen James, B.A., in special studies (theology), 1964
Payne, David Alan, B.Sc., with Honours in ceramics, class II(ii), 1963
John David, B.Sc., with Honours in civil engineering, class III, 1963
Rosemary Anne, B.A., with Honours in history, class II(ii), 1962
Peace, John David, B.Sc., with Honours in mechanical engineering, class II(i), 1962
Peacock, Philip Gerard, B.A., with Honours in geography, class II(i), 1962
Ronald, B.Sc., with Honours in civil engineering, class II(ii), 1963
Pearce, Barbara Margaret, B.A., with Honours in general studies, class II(ii), 1963
Charles Edward, B.A., with Honours in German, class II(i), 1964
Richard John, B.Sc., with Honours in civil engineering, class II(ii), 1963
Pearl, Leslie Michael, B.Com., with Honours, class II(ii), 1962
Pearmund, Joscelin Richard, B.Sc., with Honours in chemistry, class II(ii), 1963
Pearson, Brian, B.Sc., with Honours in chemistry, class II(i), 1963
Colin Paul, B.Sc., 1962
John Edwin, B.Sc., with Honours in chemistry, class II(ii), 1961
Lucia Spenser, Ph.D., 1964
Michael, B.Sc., with Honours in mining, class III, 1964
Michael John, B.Sc., with Honours in chemistry, class I, 1959; Ph.D., 1962
William Bertram, B.Sc., with Honours in civil engineering, class III, 1961
Peasley, Elizabeth Anne, B.Sc., with Honours in geography, class II(ii), 1962
Peck, Arthur, B.Sc., 1934; M.Sc., 1964
Peers, Harold William, B.Sc., with Honours in mathematics, class I, 1960; Ph.D., 1964
Janet Mary, B.A., with Honours in German, class II(ii), 1963
Judith Christine, B.Sc., 1964
Peirson, Stephen Charles, B.Sc., with Honours in general studies, class II(ii), 1964
Pellatt, Malcolm Scott, LL.B., with Honours, class II(ii), 1964
Pembroke, Elizabeth Valerie Georgina, B.A., with Honours in English, class II(i), 1964
Pencheon, James Michael, M.B., Ch.B., 1949; M.D., 1962
Pendlebury, Robert Michael, B.Sc., 1964
Penford, Fleur Sybil Winifred, B.A., with Honours in English, class II(ii), 1962
Penkett, Stuart Arthur, B.Sc., with Honours in chemistry, class II(i), 1960; Ph.D. (*in absentia*), 1963

Penny, Edwin John, B.A., with Honours in English, class II(ii), 1964
Penrith, Judith Ann, B.Sc., with Honours in chemistry, class II(i), 1961
Penswick, John Robert, B.Sc., with Honours in agricultural chemistry, class II(i), 1961
Penwill, James Grant, B.Com., with Honours, class III, 1961
Percival, Joseph Bryan, B.Sc., 1963
Olga, B.Sc., with Honours in mathematics, class II(ii), 1961
Perkins, Michael John, B.Sc., in special studies (chemistry), 1963
Petersen, William Hodgson, B.Sc., with Honours in general studies, class II(i), 1964
Petrie, David Francis, B.Sc., with Honours in civil engineering, class II(i), 1964
Petrovic, Vladimir, B.Sc., 1964
Pettifer, John Anthony, B.Sc., with Honours in chemical engineering, class III, 1962
Pettifor, Douglas John, B.Sc., with Honours in mining, class III, 1963
Peyton-Lister, Noël Michael, B.A., in special studies (English), 1964
Pheasey, Joy, B.A., with Honours in French, class III, 1964
Phelan, Philip John, B.A., with Honours in geography and history, class II(i), 1964
Philipson, Alastair Batey Morham, B.Sc., with Honours in general studies, class III, 1962
Phillippi, Marian May, B.A., with Honours in sociology, class II(ii), 1961
Phillips, Barbara Ann, B.A., with Honours in French, class II(ii), 1963
Brian, B.Sc., with Honours in physics, class II(ii), 1963
Clive Henry, LL.B., with Honours, class II(ii), 1962
John Richard, B.A., with Honours in German, class II(ii), 1964
Lionel Gordon, B.Sc., with Honours in physics, class II(ii), 1961
Philp, Brian James, B.Sc., with Honours in mathematics, class II(i), 1964
Philpott, George Colin, B.Sc., with Honours in colour chemistry, class I, 1962
Pickard, Gordon Wilson, B.Sc., with Honours in electrical engineering, class II(i), 1961
Richard Harry, B.Sc., with Honours in mechanical engineering, class II(i), 1962
Pickering, Barbara, B.Sc., with Honours in mathematics, class III, 1962
John Ryden, LL.B., with Honours, class II(ii), 1961
Pickersgill, John George, B.A., with Honours in general studies, class II(ii), 1964
Pickles, Edward Malcolm, B.Sc., with Honours in the chemistry of leather manufacture, class III, 1962
John Martin, B.Sc., 1962
Pickup, Ernest, B.A., with Honours in general studies, class II(ii), 1961
Ronald Alfred, B.A., with Honours in English, class II(i), 1962
Piddock, Peter, B.Sc., 1964
Pierce, Jeffrey Hamilton, B.Sc., with Honours in colour chemistry, class II(i), 1962
Piercy, Arthur Frederick, B.Com., with Honours, class III, 1961
Graham Douglas, B.Sc., with Honours in chemistry, class III, 1962
Patricia, B.Sc., in special studies (chemistry), 1963
Piggin, John Douglas, B.Sc., with Honours in civil engineering, class II(ii), 1963
Pike, David Harold, B.Sc., 1964
Ian Holden, B.Sc., with Honours in agricultural chemistry, class II(ii), 1963
Malcolm Robert, B.Sc., with Honours in chemistry, class II(i), 1962
Pilkington, Richard, B.Sc., in special studies (physics), 1964
Shirley Anne, B.A., with Honours in general studies, class II(i), 1964
Pilling, Brian, B.Sc., with Honours in colour chemistry, class II(ii), 1961
Geoffrey, B.A., with Honours in economics, class II(i), 1961
Pinfield, Lawrence Thomas, B.Sc., with Honours in mechanical engineering, class II(i), 1961
Pirie, Elizabeth Ann, B.A., with Honours in geography, class II(ii), 1961
Pitt, Gillian Marjorie, B.A., with Honours in English, class II(ii), 1961
Pitts, John Martin Dawson, B.Sc., 1963
Place, Colin Michael, B.Sc., with Honours in physics, class I, 1964
Plackett, Martin George, B.Sc., with Honours in mathematics, class III, 1963
Plant, David Martin, B.Sc., with Honours in civil engineering, class II(i), 1964
Platt, James Edward, B.A., with Honours in geography and history, class II(ii), 1962
Valerie, B.A., with Honours in sociology, class III, 1964
Platts, Sydney David, M.B., Ch.B., 1960

Platts, William Anthony, B.Sc. (agricultural studies), 1963
Plewes, John Anthony, B.Sc., with Honours in chemistry, class II(ii), 1958; M.Sc., 1963
Plumb, Gordon Alan, B.A., with Honours in geography, class II(i), 1964
Plunkett, Michael Edward, B.Sc., with Honours in the chemistry of leather manufacture, class II(ii), 1961
Po, Kenneth Chung-Yee, B.Sc., with Honours in electrical engineering, class I, 1958; Ph.D., 1961
Pogson, Michael, B.Sc., with Honours in mechanical engineering, class II(i), 1964
Poilly, Jean-Noël, M.B., Ch.B., 1960
Pointer, Ian David, B.Sc., with Honours in civil engineering, class II(ii), 1964
Pole, Anthony Alexander, B.Ch.D., 1963
Pollard, Alan, B.Sc., with Honours in chemistry, class II(ii), 1961
Geoffrey, Ph.D., 1964
Roy, M.B., Ch.B., 1961
Pollitt, Tom Graham, B.Sc., with Honours in chemical engineering, class II(ii), 1962
Pollock, Raymond, B.A., in special studies (economics with statistics), 1964
Poniedel, Hazel Anne Margaret, B.A., in special studies (English) (*aegrotat*), 1964
Poole, Antony William, B.Sc., with Honours in agriculture, class II(ii), 1964
Pope, Elizabeth Alice, B.A., in special studies (English) (*aegrotat*), 1964
Popley, Raymond Alan, B.Sc., with Honours in metallurgy, class I, 1964
Popplewell, Donald, B.Sc., with Honours in the chemistry of leather manufacture, class II(ii), 1961
James Malcolm, B.Sc., with Honours in metallurgy, class III, 1964
Neil, B.Sc., with Honours in mathematics, class II(i), 1964
Porritt, David Ingham, B.A., in special studies (textile management), 1963
Porter, Jeffrey Harvey, B.A., with Honours in economics, class II(i), 1964
Portlock, James John, B.A., in special studies (French), 1962
Posaner, Frederic Edgar, B.Sc., 1962
Potter, James Roger, B.Sc., with Honours in colour chemistry, class II(i), 1962
Jennifer, B.Sc., in special studies (chemistry), 1963
Potts, Geoffrey, B.A., with Honours in geography, class III, 1961
Powell, Alan Gwynne, B.A., with Honours in history, class II(ii), 1961
Bruce David, B.Sc., with Honours in chemical engineering, class III, 1964
Christopher, B.Sc., with Honours in mechanical engineering, class III, 1961
Edward Williams, B.A., in special studies (economics), 1962
Jacqueline Ann, B.A., with Honours in general studies, class III, 1963
John, B.Sc., with Honours in metallurgy, class II(i), 1964
Michael Timothy, B.Sc., with Honours in agricultural studies, class II(ii), 1961
Power, Kevin Clark, B.A., with Honours in Russian, class III, 1962
Pownall, John Stuart, B.A., with Honours in general studies, class III, 1963
Prabhakar, Tangutur, B.A., with Honours in English, class II(ii), 1962
Prasad, Ram Krishna, B.Sc., 1964
Pratt, David George, B.Sc., with Honours in chemistry, class II(i), 1959; Ph.D., 1963
John Philip, B.Sc., with Honours in physics, class II(ii), 1963
Roger, B.Sc., with Honours in civil engineering, class III, 1963
Sandra Carole, B.A., with Honours in history, class II(i), 1964
Prescott, David Jeffrey, B.A., with Honours in general studies, class II(ii), 1964
Roger, B.Sc., with Honours in physics, class II(i), 1961
Preston, Graham Michael, B.Sc., with Honours in mechanical engineering, class II(i), 1964
Peter, B.Sc., with Honours in chemistry, class III, 1964
Prew, Brian Arthur, B.Sc., with Honours in physics, class I, 1964
Price, David Noel, B.Sc., with Honours in the chemistry of leather manufacture, class II(ii), 1962
Judith Louise, B.A., with Honours in geography, class III, 1961
Muriel, B.Sc., with Honours in chemistry, class III, 1961
Patricia Ann, B.A., with Honours in German, class III, 1962
Priestley, Brian, B.A., with Honours in French, class II(ii), 1962
John Marshall, LL.B., 1964

Priestley, Nicholas, M.B., Ch.B., 1963
Susan Celia, B.A., with Honours in English, class II(i), 1964
William Arthur, B.Sc., with Honours in chemistry, class III, 1963
Primmer, Paul Ormond, B.Sc., 1964
Prior, Michael Raymond Ebenezer, B.Com., with Honours, class III, 1963
Pritchard, Anthony John, B.A., with Honours in philosophy and English literature, class II(ii), 1964
Rosemary Keith, B.A., with Honours in French, class II(ii), 1964
Roy Allan, B.Sc., 1964
Procter, Alan Thomas, B.A., with Honours in Spanish, class I, 1962
Proudlock, Geoffrey, B.Sc., 1961
Proudman, Paul, M.B., Ch.B., 1964
Pullan, Brian Robert, B.Sc., with Honours in physics, class I, 1958; Ph.D., 1963
Punter, Anthony Clive, B.A., with Honours in German, class III, 1961
Purchas, Helen Judith, B.Sc., with Honours in general studies, class I, 1964
Purdy, Sheila Jean, Ph.D., 1962
Purvis, Michael Robert Irvin, B.Sc., 1964

Quansah, John Addai, LL.M., 1962
Quaye, Benjamin Ashalley, B.Sc., 1963
Quayle, Christopher Cedric, B.Sc., with Honours in textile chemistry, class III, 1962
Quicke, John Clifford, B.A., with Honours in psychology and sociology, class II(i), 1964
Quinn, Malcolm, B.Sc., with Honours in physics, class III, 1962
Quirk, John James, B.Sc., with Honours in mechanical engineering, class III, 1962

Rabjohns, Alan, B.A., with Honours in history, class II(ii), 1962
Race, Michael, B.A., with Honours in history, class II(ii), 1963
Patricia Mary, B.A., with Honours in general studies, class III, 1961
Rackstraw, Susan Jane, B.A., with Honours in sociology, class III, 1963
Radford, Alan, B.Sc., with Honours in botany, class II(ii), 1962
Radmore, David Frederick, B.A., with Honours in geography and history, class II(ii), 1962
Rahman, Abdur, Ph.D. (*in absentia*), 1964
Raisin, John Philip, B.Sc., with Honours in mining, class II(ii), 1962
Rak, Andrzej Witold, B.Sc., in special studies (chemistry), 1961
Ralph, Michael Collins, B.Sc., with Honours in electrical engineering, class I, 1963
Ramadan, Mohamed Abjeldin, B.Com. (*in absentia*), 1964
Ramsbottom, Dennis, B.Sc., with Honours in physics, class III, 1961
Valerie Anne, B.A., with Honours in English, class III, 1962
William Neil, B.Sc., with Honours in chemistry, class II(ii), 1961
Ramsden, Michael Walter, B.A., with Honours in English and history, class III, 1964
Ramzan, Fay Catherine, B.A., with Honours in French, class III, 1962
Randall, Michael John, B.Sc., 1962
Randles, Anne, M.B., Ch.B., 1960
Rankin, Brenda, B.A., with Honours in history, class II(ii), 1964
Ranyard, John Charles, B.Sc., with Honours in gas engineering, class I, 1962
Raper, John Harvey, B.Sc., in special studies (chemistry), 1963
John Malcolm, M.B., Ch.B., 1961
Rashid, Anis Ezzat, B.Sc., 1963
Rathbone, Peter, B.Sc., with Honours in chemistry, class II(i), 1957; Ph.D., 1961
Rathmell, John, B.Sc., with Honours in chemistry, class II(i), 1961
Ravetz, Mrs. Alison, Ph.D., 1963
Rawle, John Lucas, B.Sc. (agriculture), 1964
Rawson, Daphne Thelma, B.A., with Honours in history, class II(ii), 1962
Rawston, Ian, B.A., with Honours in general studies, class II(ii), 1961

Ray, Dipok, B.Com., with Honours, class III, 1962
Ray-Chaudhuri, Prabir, Ph.D., 1964
Rayman, Jacqueline, B.Sc., with Honours in chemistry, class II(i), 1963
Raynes, David Gordon, B.Ch.D., 1964
Razvi, Khurram Ali, B.Sc., 1964
Read, Marion, B.A., with Honours in geography, class II(ii), 1964
Pauline Anne, LL.B., with Honours, class II(ii), 1964
Thomas Bonamy, B.A., with Honours in general studies, class II(ii), 1961
William Russell, B.Sc., with Honours in mechanical engineering, class II(ii), 1962
Reade, Alan Thomas, B.Sc., with Honours in civil engineering, class II(ii), 1964
Brian Anthony, B.A., with Honours in French, class II(ii), 1963
Reader, Alan Arthur, B.Sc., with Honours in civil engineering, class II(ii), 1962
Readman, John Alan, B.Sc., with Honours in civil engineering, class II(i), 1962
Reaney, Patricia Susan, B.A., with Honours in sociology, class III, 1962
Reay, Anthony, B.Sc., with Honours in geology, class II(i), 1961
Margaret, B.Sc., with Honours in zoology, class II(i), 1964
Redhead, George Trevor, B.Sc., with Honours in mechanical engineering, class II(ii), 1963
Redpath, Charles Richard, B.Sc., with Honours in chemistry, class II(i), 1957; Ph.D., 1960
Reed, Alan James, B.Sc., with Honours in geology, class II(ii), 1963
Beryl Elizabeth, B.A., with Honours in history, class II(ii), 1963
Stuart Bennett, B.Sc., with Honours in gas engineering, class II, 1958; Ph.D., 1961
Reedman, Antony John, B.Sc., with Honours in geology, class I, 1962
Rees, Glenn Eric, B.A., with Honours in economics, class II(i), 1963
Judith Margaret, B.A., with Honours in geography and history, class II(ii), 1963
Reeve, Brian, B.Sc., with Honours in botany, class II(i), 1963
Reeves, Andrew Leslie, B.A., with Honours in economics, class II(ii), 1962
Constance Sylvena, B.Sc., 1963
Reid, Ian Michael, B.Ch.D., 1962
Rosemary, B.A., with Honours in philosophy and history, class II(ii), 1964
Reilly, Edwin George, B.Sc., with Honours in general studies, class III, 1961
Relf, David Edward, B.Sc., with Honours in metallurgy, class II(ii), 1963
Remington, Teresa Evelyn Mary, B.A., with Honours in Latin, class II(ii), 1963
Renardson, Christopher, B.A., in special studies (economics), 1961
Render, Malcolm, B.Sc., 1964
Renfrew, Norman Turnbull, B.Ch.D., 1962
Renwick, Joseph Graham, B.Sc., 1964
Rethman, Hugh Lawrence, LL.B., with Honours, class II(ii), 1963
Reuben, Elizabeth, M.A. (*in absentia*), 1961
Revell, Richard Frank, B.A., with Honours in Latin, class II(ii), 1964
Revill, Barbara Lesley, B.Sc., with Honours in chemistry, class II(i), 1962
Rhodes, Charles Duncan, B.Sc., with Honours in chemical engineering, class II(ii), 1962
Christopher Patrick Lawry, B.A., with Honours in mathematics, class I, 1963
John David, B.Sc., with Honours in electrical engineering, class II(i), 1964
Riall, Richard Anthony, B.Sc., 1964
Rice, Edward Addison, B.Sc., with Honours in mathematics, class II(i), 1962
Rich, Charles Stephen Anthony, LL.B., with Honours, class II(ii), 1963
Richards, Dale, B.A., in combined studies (geography and sociology), 1964
Janet Ann, B.A., with Honours in history, class III, 1963
Neville Andrew Clive, B.A., with Honours in Russian, class II(ii), 1949; M.A., (*in absentia*), 1962
Richardson, Ann Margaret, B.A., with Honours in general studies, class II(ii), 1961
Colin, M.B., Ch.B., 1962
Colin, B.Sc., in special studies (chemistry), 1964
Donald Gavin, B.Sc., with Honours in mechanical engineering, class II(ii), 1961
Gerald Arthur, B.Sc., with Honours in colour chemistry, class II(i) 1961; M.Sc., 1964
Jillian Freda, B.Ch.D., with Honours, class II, 1963
John, B.A., with Honours in French, class III, 1961
Nola Gwendoline, B.A., in special studies (French), 1962

Richardson, William Henry, B.Sc., 1961
Richmond, David Robin, M.B., Ch.B., with Honours, class I, 1961
Michael John, M.B., Ch.B., 1960
Ricketts, Terence Roy, B.Sc., with Honours in biochemistry, class II(ii), 1959; Ph.D., 1962
Riddell, Gillian Lesley, B.A., with Honours in geography, class II(ii), 1961
Ridgway, Susan Mary, B.A., with Honours in psychology and sociology, class II(ii), 1964
Ridley, David John, B.Sc., with Honours in physics, class III, 1962
Riley, Albert Patrick, B.A., with Honours in geography and sociology, class III, 1963
David William, B.A., with Honours in psychology and sociology, class II(ii), 1964
Delphine, B.A., with Honours in English, class III, 1963
Kathleen, B.Sc., with Honours in chemistry, class I, 1962
Patrick John, B.A., in general studies, 1962
Robert Michael, M.B., Ch.B., 1961
Rimmer, Bernard, B.Sc., with Honours in civil engineering, class II(i), 1961
Michael, B.A., with Honours in English, class III, 1963
Ripley, Alan Gordon, B.Sc., 1963
Ritchie, Eric, B.Sc., with Honours in chemical engineering, class I, 1962
John James, B.Sc., with Honours in civil engineering, class III, 1961
Rivlin, Geoffrey, LL.B. (*aegrotat*), 1961
Robb, Ian David, B.Sc., 1963
Robbins, Kenneth, B.Sc., with Honours in civil engineering, class I, 1964
Roberts, Anthony Howard Norman, B.Sc., with Honours in gas engineering, class II(i), 1961
Celia Anne, B.A., with Honours in general studies, class II(ii), 1961
Clive, B.Ch.D., 1964
Colin Andrew, B.A., in general studies, 1962
Daniel John, B.Sc., 1960
David, B.Sc., with Honours in geology, class III, 1962
David Edward, B.Sc., 1962
George Bryan, B.Sc., with Honours in chemical engineering, class III, 1962
Jill Mary, LL.B., with Honours, class II(ii), 1964
John Bernard Michael, M.B., Ch.B., 1952; Ch.M., 1963
Kathleen Rosemary, B.Sc., with Honours in pharmacy, class II(i), 1961
Malcolm Brittain, B.Sc., with Honours in colour chemistry, class II(i), 1962
Paul Leonard, B.A., with Honours in history, class II(i), 1964
Philip Russell Freer, B.Sc., with Honours in mathematics, class II(ii), 1964
William Neil, Ph.D. (*in absentia*), 1961
Robertson, Alan Forbes, B.Sc., with Honours in chemical engineering, class II(ii), 1961
Byron Maurice Willan, B.A., with Honours in sociology, class III, 1961
Colin Crawford, M.B., Ch.B., 1960
John Stuart, LL.B., with Honours, class II(ii), 1962
Michael Alan, B.Sc., with Honours in electrical engineering, class II(ii), 1961
Peter Gordon, B.Sc., 1964
Robey, Kenneth Gordon, B.Sc., with Honours in physics, class II(i), 1963
Robins, Jean Caroline, B.A., with Honours in French, class II(ii), 1963
Renton Thomas, B.A., with Honours in theology, class II(ii), 1964
Susan Patricia, B.A., with Honours in French, class II(ii), 1964
Robinson, Colin Roger, B.Sc., with Honours in civil engineering, class II(i), 1962
David, B.Sc., with Honours in chemical engineering, class II(ii), 1962
David George, B.Sc. (agriculture), 1964
Dorothy Hazel, B.A., with Honours in Russian, class II(ii), 1963
Enid Dorothy, B.A., in special studies (English), 1962
George Leslie, B.Sc., with Honours in civil engineering, class I, 1952; Ph.D., 1960
Graham Michael, B.A., with Honours in sociology, class II(ii), 1964
Howard, B.Sc., 1964
Ian, B.Sc., with Honours in chemical engineering, class II(i), 1964
John Philip, B.A., with Honours in geography, class II(i), 1961

Robinson, John Victor, B.A., in combined studies (geography and history), 1963
Patricia, B.A., with Honours in music, class III, 1962
Pauline Brenda, B.A., with Honours in German, class II(ii), 1961
Peter John, B.Sc., with Honours in colour chemistry, class II(ii), 1964
Peter Maurice, B.A., with Honours in general studies, class II(ii), 1963
Richard John, M.Sc., 1962
William Ingham, B.Sc., with Honours in chemical engineering, class I, 1963
Robson, Andrew Maxwell, B.Sc., 1964
George Arthur, B.Sc., with Honours in mathematics, class II(i), 1962
Margaret, B.Sc., in general studies, 1962
Patrick Edward Barker, B.Sc., 1964
Rodley, Nigel Simon, LL.B., with Honours, class II(ii), 1963
Roe, Alan Raymond, B.Com., with Honours class I, 1963
Gwendolen, B.A., with Honours in classics, class II(i), 1964
Rogers, Beverley, B.Sc., with Honours in chemistry, class II(ii), 1963
Lyndon John, B.Sc., with Honours in biochemistry, class II(i), 1960; Ph.D., 1963
Roll, Brenda, B.A., with Honours in general studies, class II(ii), 1964
Rollett, Robert Henry, B.A., in general studies, 1961
Rolls, Bruce Grounds Renham, B.Ch.D., 1961
John, M.Sc., 1963
Ronan, Anne Ruth, B.A., with Honours in French, class III, 1964
Rooke, Geoffrey Frederick, B.Sc., with Honours in civil engineering, class I, 1962
Peter Leslie, LL.B., with Honours, class III, 1962
Room, David Edward, B.A., with Honours in English, class II(i), 1964
Roper, Norman, M.Sc., 1962
Rose, Ann Lesley, B.Sc., with Honours in agricultural botany, class III, 1963
Eric Gordon, B.Sc., in general studies, 1964
Finn Tore, B.A., with Honours in economics, class II(ii), 1964
George Howard, B.Sc., with Honours in civil engineering, class II(ii), 1963
Gillian Margaret, B.A., with Honours in French, class II(i), 1961
John Thomas, M.B., Ch.B., 1953; M.D., 1961
Naomi Jacqueline, M.B., Ch.B., 1963
Rosen, Anthony Harry, B.Sc., with Honours in chemical engineering, class I, 1963
Betty, B.A., with Honours in political studies, class III, 1963
Rosenberg, Wilfred, B.Ch.D., 1964
Rosengarten, Terence Harold, M.B., Ch.B., 1960
Rosewarne, Melvyn Douglas, M.B., Ch.B., 1963
Ross, Alastair Roderick, B.Sc., with Honours in biochemistry, class II(ii), 1962
Brian, B.A., with Honours in economics, class III, 1963
Paul, B.A., with Honours in Latin, class III, 1962
William Duncan, B.A., with Honours in history, class II(ii), 1964
Rostron, Jean Margaret, B.Sc., with Honours in general studies, class III, 1963
Rothwell, Alan, B.Sc., 1963
Rough, Peter David, B.Sc., with Honours in chemical engineering, class I, 1964
Routledge, Janet Kathleen, B.A., with Honours in French, class III, 1961
Rowberry, Kathleen Bernice, B.A., with Honours in sociology, class III, 1963
Rowe, David John, B.A., with Honours in French, class II(i), 1964
Ian MacDonald, B.A., in special studies (French and Latin), 1962
Jean Ann, B.A., with Honours in English, class II(ii), 1961
Jean Patricia, B.A., with Honours in general studies, class II(ii), 1963
Rowell, Jack Alan, B.Sc., with Honours in geology, class I, 1952; M.Sc., with distinction (*in absentia*), 1964
Rowland, Eric Edward James, B.A., in general studies, 1962
Roxby, John David Harrison, B.A., with Honours in German, class II(ii), 1961
Roy, Prithwiraj, B.Sc., 1963
Santosh Kumar Dutta, Ph.D. (*in absentia*), 1961
Royle, Reginald John, B.A., with Honours in philosophy and politics, class III, 1961
Royse, Helen Cora Louise, B.A., with Honours in French, class II(ii), 1964

Royston, Anthony, B.Sc., with Honours in chemistry, class II(i), 1964
Jeremy, B.Sc., with Honours in chemistry, class I, 1964
Rubery, David Edgar, B.Sc., with Honours in civil engineering, class II(ii), 1964
Rudd, Elizabeth Marjorie, B.A., with Honours in sociology, class II(ii), 1962
Rudge, Anthony John, B.Sc., with Honours in chemistry, class II(i), 1963
Rudkin, Clive, B.A., with Honours in French, class III, 1961
Rumfitt, Colin, B.Sc., with Honours in electrical engineering, class III, 1963
Rumney, Joan Elaine, B.A., with Honours in English and history, class II(ii), 1964
Rushton, Joy Brigid, B.A., with Honours in general studies, class III, 1962
Rushworth, Alan, B.Sc., with Honours in chemistry, class III, 1963
Russell, Anne Juliet, B.A., in special studies (history), 1963
Geoffrey Harold, B.Ch.D., 1963
Patrick Frederick, B.Sc., 1962
Roger Francis, B.Sc., with Honours in general studies, class II(ii), 1963
Rutherford, Derek, B.A., with Honours in theology, class II(ii), 1961
Duncan Johnston, B.Sc., with Honours in civil engineering, class II(ii), 1963
Ryan, John Joseph, B.A., in special studies (sociology), 1962
William, Ph.D., 1962
Ryder, Margaret, B.A., with Honours in French, class II(ii), 1963
Peter, B.Sc., with Honours in physics, class I, 1963
Peter Langtree, Ph.D., 1964

Saddleton, Doreen Vipond, B.A., in general studies, 1961
Sagar, Keith Milsom, Ph.D., 1962
Sahasrabudhe, Narayan Gangadhar, M.Sc. (*in absentia*), 1961
Sahota, Sarwan Singh, Ph.D., 1964
Saib, Sermed Anwar, B.Sc., with Honours in civil engineering, class II(ii) (*in absentia*), 1961
St. Quinton, John Michael Paul, B.Sc., with Honours in physics, class I, 1957; Ph.D., 1961
St. Rose, Peter Archer Wilwyn, M.B., Ch.B., 1964
Sales, Julia Ann, B.Sc., with Honours in general studies, class III, 1963
Salminen, Rista Erkki Kalevi, B.Sc. (*in absentia*), 1961
Salmon, David John Wilfred, B.A., with Honours in economics, class III, 1964
Salmons, Francis William, B.Sc., with Honours in general studies, class II(ii), 1961
Sames, Christopher David, B.A., with Honours in sociology and philosophy, class II(ii), 1964
Samways, Denis Robert, B.A., with Honours in general studies, class III, 1962
Sanchez, Mrs. Patricia Mary, B.A., with Honours in French, class II(ii), 1962
Sanctuary, Sarah Ruth, B.Sc., with Honours in geography, class II(ii), 1964
Sanders, John, B.Sc., with Honours in mechanical engineering, class II(i), 1962
John, B.Sc., with Honours in civil engineering, class III, 1964
Richard John, B.Sc., with Honours in civil engineering, class II(ii), 1963
Sanderson, Donald, B.Sc., 1964
Graham, B.Sc., with Honours in chemistry, class II(ii), 1963
John Henry, B.A., with Honours in general studies, class III, 1961
Peter, B.Sc., with Honours in chemistry, class II(i), 1962
Roy David, B.Sc., 1962
Sandle, Charles Douglas, B.A., with Honours in psychology and sociology, class II(i), 1963
Sands, Basil Courtney, B.Sc., with Honours in textile chemistry, class II(ii). 1961
Sant, Michael John, B.Sc., with Honours in mining, class II(i), 1962
Sargeant, Christopher John, B.Sc., with Honours in chemistry, class III, 1964
Sargent, Frederick Peter, M.Sc., 1963
John B.A., with Honours in geography, class I, 1962
Saul, David William, B.Sc., with Honours in agriculture, class III, 1964
Geoffrey Hugh, B.Sc., 1961
Gillian Christine, B.Sc., with Honours in chemistry, class II(ii), 1961

Saunders, Barbara Anne, B.A., with Honours in Latin, class II(ii), 1962
Brian Hampton, LL.B., with Honours, class III, 1961
Francis Ernest Joseph, B.Sc., with Honours in general studies, class II(ii), 1963
Lynda Ann, B.A., with Honours in general studies, class III, 1962
Saunderson, David, B.A., with Honours in Spanish, class II(ii), 1964
Savage, Alethea Joan, B.A., with Honours in general studies, class II(i), 1961
Anita, B.A., with Honours in English and history, class II(ii), 1964
Savidis, Chrysostomos, M.A., 1963
Saville, Stanley Keith, B.Sc., 1962
Savva, Georghios Christou, M.B., Ch.B., 1962
Savvides, Georgios Eftychiou, M.B., Ch.B., 1962
Sawko, Felicjan, B.Sc., with Honours in civil engineering, class I, 1958; M.Sc., 1960
Saword, Rosemary Joan Elizabeth, M.B., Ch.B., with Honours, class II, 1961
Saxby, John Patrick, B.Sc., with Honours in civil engineering, class III, 1962
Saxton, Craig Allan Paul Dance, B.Sc., with Honours in anatomy, class II(ii), 1963
Sayer, Norma, B.A., with Honours in geography, class III, 1961
Rodney, B.A., with Honours in German, class III, 1961
Scammell, Gerald William, B.Sc., in special studies (biochemistry), 1964
Scarlett, George, B.Sc., with Honours in chemistry, class II(i), 1961
Scatchard, Philip John, B.Sc., 1963
Schaffer, Gwendoline Mary, B.A., with Honours in English, class II(ii), 1963
Schefer, Peter Valentine, B.Sc., with Honours in physics, class I, 1961
Schofield, James, B.Sc., with Honours in physics, class II(ii), 1961
Keith, B.A., with Honours in general studies, class II(ii), 1962
Robert Michael, B.Sc., with Honours in civil engineering, class III, 1963
Scholefield, John, B.Sc., in general studies, 1960; M.Sc., 1964
Scholes, Edward, B.A., with Honours in Latin, class II(i), 1959; M.A., 1961
Scholey, Brian Ronald, B.Sc., with Honours in biochemistry, class II(i), 1963
Schroeder, Peter Robin, B.Sc., with Honours in chemistry, class III, 1961
Schubeler, Leslie, B.A., with Honours in general studies, class II(ii), 1964
Schumacher, Eric Graham, B.Sc., with Honours in civil engineering, class I, 1957; Ph.D., 1961
Scotney, John, B.Sc., with Honours in chemistry, class II(ii), 1961
Scott, Brian, B.Sc., with Honours in ceramics, class II(i), 1964
David Nigel, B.Sc., 1964
Diana Wendy, B.A., in special studies (mathematics), 1963
Dorothy, B.A., with Honours in geography, class II(ii), 1963
George David, B.Sc., with Honours in electrical engineering, class III, 1963
George Reilly, B.Sc., with Honours in electrical engineering, class II(i), 1961
Jean, B.A., with Honours in theology, class III, 1961
Joseph, B.Sc., with Honours in chemical engineering, class II(ii), 1964
Peter Bruce, B.Sc., 1964
Philip Gibson, B.Sc., with Honours in mathematics, class II(ii), 1961
Philip Stephen, B.A., with Honours in French, class III, 1961
Thomas Arthur, B.Sc., with Honours in biochemistry, class II(i), 1957; Ph.D., 1960
Scotter, Patrick Roy, M.B., Ch.B., 1960
Screen, Mavis Anne, B.A., with Honours in French, class III, 1963
Scrogie, Jacqueline Margaret, B.A., with Honours in French, class II(i), 1962
Scrowston, Richard Michael, B.Sc., with Honours in chemistry, class I, 1958; Ph.D., 1961
Seager, Harry, B.Sc., with Honours in pharmacy, class II(ii), 1962
Seal, Stephen Richard, B.Sc., with Honours in agriculture, class II(i), 1964
Sealby, Anne Sparks, B.Sc., with Honours in chemistry, class II(ii), 1961
Sealy, Roger Kenneth, B.Sc., with Honours in mechanical engineering, class III, 1964
Searle, Arthur, B.A., with Honours in general studies, class II(i), 1962
Seddon, Roy, B.Sc., with Honours in colour chemistry, class II, 1959; Ph.D., 1962
Sedgwick, June Rose, B.A., with Honours in sociology, class II(ii), 1964
Seed, Mary, B.A., with Honours in history, class II(ii), 1961

Seed, Raymond, B.Sc., with Honours in general studies, class I, 1963; with Honours in zoology, class II(i), 1964
Seekings, Anne, B.A., with Honours in English, class III, 1963
Seirafi, Mohammad Ali, B.A., with Honours in economics, class III, 1964
Sellars, Brian Henry, B.Sc., with Honours in metallurgy, class III, 1962
Graham Curtis, B.A., with Honours in geography, class I, 1962
Seller, Anne Elizabeth, B.A., with Honours in philosophy, class II(i), 1963
Selwyn, Irwin Neville Geoffrey, B.Com., with Honours, class II(ii), 1962
Seneviratne, Edward Charles Anthony, LL.B., 1961
Sengupta, Sudhansu Kumar, B.Sc., 1962
Senior, Henry Stanley, B.Sc., with Honours in electrical engineering, class II(ii), 1961
Jeffrey Allen, B.Sc., with Honours in metallurgy, class II(i), 1964
Michael Wraith, B.A., with Honours in geography, class II(i), 1954; M.A., 1960
Ruth, LL.B., with Honours, class II(i), 1962
Sepehri, Lila, B.A., with Honours in sociology, class III, 1964
Sequeira, May Guiomar, B.A., with Honours in general studies, class II(ii), 1962
Serophim, Georges-Robert Samir, B.Sc., with Honours in electrical engineering, class II(ii), 1964
Serre, Jacqueline Loretta, B.A., with Honours in sociology, class III, 1964
Seshadri, Prathivadhibayankar Venkatachar, Ph.D. (*in absentia*), 1963
Sew-Kwan-Kan, Ela Ginette, B.A., in general studies (*aegrotat*), 1961
Sewell, Isaac William, B.A., with Honours in French, class III, 1962
Shah, Harivadan Amritlal, B.Sc., 1963
Jasvant Babaldas, B.Sc., 1961
Kapurchand, B.Sc. (*in absentia*), 1962
Momin, B.Sc., 1964
Navinchandra Somalal, B.Sc., 1963
Vinodchandra Jatashanker, B.Sc., with Honours in electrical engineering, class II(i), 1961
Shahin, Anne Elizabeth, B.Sc., with Honours in geography, class II(ii), 1964
Shapland, Jeffrey Malcolm, B.Sc., with Honours in chemical engineering, class III, 1964
Sharma, Ravi Datt, LL.B., with Honours, class III, 1963
Sharp, Valerie Joan, B.Sc., 1961
Sharpe, Beverley Hartley, B.A., with Honours in economics, class III, 1962
Geoffrey Thomas, B.Sc., with Honours in chemistry, class II(ii), 1962
William Anthony, B.Sc., in special studies (mathematics), 1962
Sharples, Peter, B.Sc., with Honours in metallurgy, class II(ii), 1962
Shaw, Angus Hamilton Cameron, B.A., with Honours in textile management, class I, 1964
Brian Maurice, B.Sc., 1963
John, B.Sc., with Honours in chemical engineering, class II(ii), 1961
John Walter, B.Sc., with Honours in civil engineering, class II(i), 1963
John William Gladwin, B.A., with Honours in French, class III, 1962
Margaret Jane, B.A., with Honours in sociology, class II(ii), 1963
Michael Howard, B.Sc., with Honours in chemistry, class II(ii), 1961
Rosalind, B.A., with Honours in French, class III, 1964
Sheard, Lawrence, B.Ch.D., 1962
Shearman, Brian Leslie, B.A., with Honours in classics, class II(ii), 1961
Sheehan, Doreen Mary, B.A., with Honours in geography and history, class III, 1963
Sheldon, Ian, B.Sc., 1961
Shelmerdine, John, B.Sc., with Honours in general studies, class II(ii), 1961
Shenton, Ernest Frederick, B.A., with Honours in English, class II(ii), 1961
Sandra Ann, B.A., with Honours in general studies, class II(ii), 1962
Shepherd, Anthony, B.A., in special studies (German), 1962
Shepley, Kathleen, B.Sc., with Honours in geography, class III, 1963
Sheppard, Gillian Irene, B.A., with Honours in English, class II(ii), 1964
Marian Kathleen, B.A., with Honours in English, class II(i), 1961
Sheridan, Anne, B.A., with Honours in general studies, class III, 1962
Clive Anthony, B.Sc., 1962

Sherrad, Brian Henry, B.A., with Honours in general studies, class II(ii), 1961
Sherratt, Brian Walter, B.A., with Honours in theology, class III, 1964
Sherriff, David John Benjamin, B.A., with Honours in English, class II(ii), 1961
Robert, B.Sc., 1964
Sherrington, Alwyn, B.A., in special studies (textile design), 1962
Sherwen, Anne Margaret, B.A., with Honours in general studies, class III, 1964
Sherwin, Jeffrey Raphael, M.B., Ch.B., 1961
Shevade, Vasudeo Shanker, Ph.D., 1962
Shewan, Thomas David, B.A., with Honours in German, class II(i), 1962
Shields, Valerie Anne, B.A., with Honours in geography, class III, 1963
Shinn, Colin Ernest Graham, B.Sc., with Honours in chemical engineering, class II(ii), 1964
Shirley, Richard, LL.B., with Honours, class III, 1964
Shore, Derek, B.Sc., with Honours in chemical engineering, class I, 1962
Shorrock, David James, B.Sc., with Honours in agricultural studies, class II(i), 1962
Short, Robert Ian, B.A., with Honours in French, class II(ii), 1961
Shorter, Marion Irene, B.A., with Honours in history, class II(ii), 1962
Shrestha, Narayan Prasad, B.A., with Honours in English, class II(i), 1962
Shute, Raymond Charles, B.A., with Honours in French, class II(i), 1962
Shuttleworth, Elizabeth Helen, B.Mus, 1951; M.A., 1962
Leslie, B.Sc., with Honours in colour chemistry, class II(i), 1964
Shyvers, Roy Trevor, B.Sc., with Honours in chemistry, class II(i), 1961
Siddell, Janice Margaret, B.Sc., with Honours in mathematics, class II(ii), 1962
Siddiqui, Masih uddin Ahmad, M.A., 1962
Side, Harry John Alan, Ph.D., 1964
Sihra, Gurmit Singh, B.A., in special studies (economics), 1963
Silk, Maurice Geoffrey, B.Sc., with Honours in physics, class I, 1960; Ph.D., 1964
Silkin, Jon, B.A., with Honours in English, class I, 1962
Sills, David, B.Sc., in special studies (mathematics), 1963
Stanley Albert, B.Sc., with Honours in chemistry, class II(ii), 1958; Ph.D., 1963
Silman, Mrs. Gertrude, B.Sc., with Honours in biochemistry, class III, 1958; M.Sc., 1964
Silverstone, Leon Martin, B.Ch.D., 1964
Simison, Aileen Mairi, B.Sc., with Honours in mathematics, class II(i), 1961
Simm, Peter Lawrence, B.A., with Honours in French, class II(ii), 1961
Simmons, Barry Jeremy, B.A., in general studies, 1954; M.A., 1962
Philip Andrew, B.Sc., in general studies, 1964
Sydney, B.Sc., with Honours in electrical engineering, class II, 1949; M.Sc., with distinction, 1961
Simons, Peter, B.Sc., in general studies, 1961
Simpkin, Clifford Robert, B.Sc., with Honours in general studies, class II(i), 1961
Simpson, Andrew Archibald, B.Sc., with Honours in civil engineering, class III, 1961
Barry, B.Sc., with Honours in chemistry, class III, 1962
David Michael, B.A., with Honours in geography and history, class III, 1962
Desmond, LL.B., with Honours, class II(ii), 1961
Glenys Anne, B.A., with Honours in philosophy and politics, class III, 1962
John Anthony, B.Sc., with Honours in general studies, class I, 1958; M.Sc., 1960
John Henry, B.Sc., with Honours in civil engineering, class II(i), 1962
Roger Maurice, B.Sc., with Honours in mechanical engineering, class II(i), 1963
Stephen Paul, B.Sc., with Honours in mathematics, class III, 1962
Terence, B.Sc., with Honours in colour chemistry, class III, 1962
William Trevor Schroell, B.A., with Honours in French, class III, 1963
Sims, Peter Stanford, B.Sc., with Honours in chemistry, class II(ii), 1964
Sinclair, John Malcolm, B.Sc., with Honours in metallurgy, class II(ii), 1962
Singh, Ashwini Kumar, B.Sc., 1964
Bachu Narain, B.Sc., 1964
Harballabh Narayan, B.Sc., with Honours in mining, class III, 1963
Harihar Prasad, B.Sc., 1964
Jamuna Prasad, B.Sc., 1961

Singh, Konthoujam Rajendra, Ph.D. (*in absentia*), 1961
Ramsumair, B.Sc., 1964
Singleton, Eric, B.Sc., with Honours in chemistry, class II(ii), 1964
Patricia, B.Sc., with Honours in general studies, class III, 1961
Sinha, Indu Bhusan Saran, B.Sc., 1964
Suresh Kumar, B.Sc., with Honours in mining, class III, 1963; B.Sc., 1964
Sisley, William Douglas, B.Sc., with Honours in chemistry, class II(i), 1958; Ph.D., 1962
Skeldon, Philip, B.A., with Honours in general studies, class III, 1962
Skelton, Roy Anthony, B.Sc., with Honours in fuel science, class I, 1962
Sklair, Leslie Allan, B.A., with Honours in sociology and philosophy, class II(i), 1964
Slack, Ian Richard, B.Sc., in general studies, 1964
Margaret, B.A., with Honours in general studies, class II(i), 1964
Slater, Brian Leslie, B.Sc., 1964
Christine Beryl, B.Sc., with Honours in chemistry, class II(i), 1962
Derek George, B.Sc., with Honours in leather science, class III, 1963
Guy Dawson, B.Ch.D., 1964
John David, B.Sc., with Honours in metallurgy, class III, 1962
Margaret, B.A., with Honours in general studies, class III, 1964
Rosalind Sara, B.Sc., with Honours in zoology, class III, 1962
Slawson, Carolyn Frances, B.A., with Honours in French, class II(ii), 1962
Slinger, Norman Ian, B.Sc., with Honours in general studies, class I, 1964
Slinn, Gillian Anne, B.A., with Honours in English, class II(i), 1964
Keith Robin, B.Sc., with Honours in electrical engineering, class I, 1963
Sloan, Donald John Evington, B.Sc., with Honours in physics, class II(ii), 1962
Smart, Timothy Edwin Harwood, B.A., with Honours in English, class II(ii), 1964
Smee, Philip Bishop, B.A., with Honours in general studies, class III, 1962
Smellie, Rosemary Yvonne, B.A., with Honours in geography and history, class II(i), 1963
Smethurst, Alan, B.A., with Honours in general studies, class II(ii), 1964
Smiddy, Francis Geoffrey, M.B., Ch.B., 1944; Ch.M., 1960; M.D., 1963
Smirfitt, John Arthur, B.Sc., 1958; M.Sc., 1962
Smith, Andrew John, B.A., with Honours in fine art and philosophy, class II(ii), 1961
Andrew Peter, B.Sc., with Honours in civil engineering, class III, 1963
Antony Edward, B.Sc. (agricultural studies), 1962
Beryl Evelyn, B.Sc., with Honours in general studies, class I, 1961
Beryl Germaine, B.Sc., in general studies, 1962
Brian, B.A., with Honours in geography, class II(i), 1964
Brian George, B.Ch.D., 1961
Carole, LL.B., with Honours, class II(ii), 1963
Christopher Michael, B.Sc., with Honours in chemistry, class II(i), 1962
Christopher Paul, B.Sc., 1963
Colin Lunn, M.B., Ch.B., 1962
David, B.Sc., with Honours in agricultural studies, class II(ii), 1961
David Anthony, B.A., with Honours in economics class II(ii) 1964
David Barry, B.Sc., with Honours in chemistry, class II(i), 1963
David George, B.Sc., in general studies, 1962
David Ralph, B.Com., with Honours, class II(i), 1961
David Warner, B.A., with Honours in Latin with French, class II(i), 1954; Ph.D. (*in absentia*), 1961
Donald Charles Malcolm, M.B., Ch.B., 1961
Donald Malcolm, B.A., in special studies (textile management), 1963
Donald Reed, Ph.D. (*in absentia*), 1961
Dudley James, B.Sc., with Honours in physics, class III, 1961
Geoffrey William, B.Sc., with Honours in colour chemistry, class II(ii), 1963
Gerald Joseph, M.Sc. (*in absentia*), 1962
Gillian, B.A., with Honours in general studies, class II(ii), 1962
Gordon McLennan, B.Sc., with Honours in agricultural chemistry, class I, 1964
Graham Peter, B.Sc., 1964
Harry, B.A., with Honours in English, class II(ii), 1964

Smith, Ian David, B.Sc., with Honours in geology, class III, 1961
Jane Christine, B.A., with Honours in French, class II(ii), 1964
Janette Ann, B.A., with Honours in geography, class II(ii), 1964
John, B.Sc., with Honours in anatomy, class II(i), 1962
John Andrew, B.Sc., 1964
John Barry, B.Sc., in general studies, 1961
John Christopher, B.Sc., with Honours in physics, class II(ii), 1964
John Gordon, B.Sc., 1963
John Henry, B.Sc., with Honours in general studies, class III, 1962
John Linton, B.Sc., with Honours in fuel science, class I, 1962
John Malcolm, B.Sc., with Honours in chemistry, class II(ii), 1964
John William, B.A., with Honours in economics, class III, 1962
Josephine Anne, B.Sc., with Honours in general studies, class II(ii), 1963
Keith, B.A., with Honours in general studies, class III, 1961
Keith William, B.A., with Honours in music, class III, 1961
Kenneth John, B.A., with Honours in English, class II(ii), 1963
Linda, B.Sc., with Honours in general studies, class I, 1963
Malcolm Grenville, B.Sc., with Honours in colour chemistry, class II(ii), 1961
Margot Susan, B.A., with Honours in philosophy and English literature, class II(ii), 1964
Marjorie Ann, B.A., with Honours in music, class II(i), 1963
Michael Arthur, B.Sc., with Honours in civil engineering, class II(i), 1963
Michael James, B.Sc., with Honours in chemistry, class II(ii), 1964
Michael Jon, B.A., with Honours in music, class II(ii), 1962
Peter David, B.Sc., with Honours in mathematics, class III, 1964
Peter Jackson, M.Sc., 1961
Peter John, B.A., with Honours in sociology, class II(i), 1963
Peter Joseph, M.B., Ch.B., 1961
Philip Arthur, B.Sc., with Honours in textile industries, class I, 1953; Ph.D., 1960
Ralph Bernard, B.A., with Honours in history, class I, 1959; Ph.D., 1963
Raymond, B.Sc., with Honours in chemistry, class II(ii), 1961
Reginald Hartley, B.Sc., with Honours in agricultural economics, class II(ii), 1963
Robert Peter, B.Sc., with Honours in chemistry, class II(ii), 1963
Robert William Blackwood, B.Sc., with Honours in electrical engineering, class III, 1962
Robin Oldham, B.Sc., with Honours in agricultural botany, class II(ii), 1961
Rodney Nigel, B.Sc., with Honours in general studies, class III, 1964
Roger Graham, B.Sc., with Honours in chemistry, class III, 1962
Rona Margaret, B.Sc., with Honours in general studies, class I, 1963
Ronald, M.A., 1963
Roy, B.A., with Honours in geography, class II(ii), 1961
Stuart Grayston, B.Sc., 1930; Ph.D., 1935; D.Sc., 1962
Susan, B.Sc., with Honours in general studies, class II(ii), 1962
Terence Joseph, B.Sc., with Honours in colour chemistry, class II(ii), 1964
Thomas Joseph, B.A., with Honours in Latin, class II(ii), 1963
Timothy John Bertrand, B.Sc., with Honours in electrical engineering, class II, 1957; Ph.D., 1961
Smithies, Adrian Christopher, B.Sc., with Honours in chemistry, class II(i), 1963
Edward Draper, B.A., with Honours in history, class II(i), 1963
Snape, Edwin, B.Sc., with Honours in metallurgy, class II(ii), 1962
Snow, Colin Hugh, B.Sc., with Honours in civil engineering, class II(ii), 1962
Snowden, Margaret Campbell, B.Sc., with Honours in general studies, class I, 1961
Snowdin, Jean, B.A., with Honours in history, class II(ii), 1964
Solarin, Edmund Oluwaseun, B.Ch.D., 1963
Somlai, George Robert, B.A., with Honours in psychology, class II(ii), 1961; M.A., 1963
Soni, Prem Kumar, B.Sc., 1962
Soodeen, Tyrone Harvey, M.B., Ch.B., 1963
Sooltan, Shaukataly, B.Sc., with Honours in physics, class III, 1961

Sorbie, Patricia Margaret, B.A., with Honours in sociology, class III, 1964
Souter, Eileen Elizabeth, B.A., with Honours in English and history, class III, 1963
Southam, John Chambers, B.Ch.D., 1962
Southern, Bruce Grenville Dallon, B.A., with Honours in geography, class II(ii), 1962
Jean, B.Sc., with Honours in general studies, class II(ii), 1964
Southgate, Martin, B.Sc., with Honours in general studies, class II(ii), 1961
Speakman, Colin, B.A., with Honours in English, class II(i), 1962
Spector, Roy Geoffrey, M.B., Ch.B., 1956; M.D., 1962
Ruth, B.A., with Honours in history, class II(ii), 1961
Speight, Philip Michael, B.A., with Honours in French, class II(ii), 1962
Spence, Sheila Kirstine, B.A., with Honours in English and history, class III, 1964
Spencer, David Charles, B.A., with Honours in English, class III, 1961
John Alan, M.B., Ch.B., 1961
John Brian, B.Sc., with Honours in mathematics, class III (*in absentia*), 1962
Malcolm, B.Sc., with Honours in chemistry, class II(i), 1959; Ph.D., 1963
Mrs. Margaret Elaine, M.B., Ch.B., 1961
Philip John, B.Sc., 1962
Susan, B.A., with Honours in textile design, class II(ii), 1961
Spengeller, John Ericson, B.Sc., 1963; with Honours in mechanical engineering, class II(i), 1964
Spicer, Neville, B.Sc., with Honours in chemical engineering, class II(i), 1961
Spier, Lorna Carolyn, B.A., with Honours in history, class III, 1964
Spooner, David Eugene John, B.A., with Honours in English, class I, 1963
Wendy, B.Sc., with Honours in general studies, class III, 1963
Spooner-Whyte, Peter Richard, B.Sc., with Honours in mechanical engineering, class II(ii), 1964
Spowart, Angela Mary, B.A., with Honours in theology, class III, 1963
Squire, Mary Marjorie, B.A., with Honours in history, class III, 1962
Squires, Maureen, B.A., with Honours in general studies, class III, 1961
Sandra, B.A., with Honours in French, class II(i), 1961
Srinivasan, Ramamurthi, M.Sc., 1964
Sripathi, Rangaswamy, B.Sc., 1963
Stable, Jean Nora, B.A., with Honours in Spanish, class III, 1961
Stacey, William Frederick, B.Sc., with Honours in physics, class II(ii), 1964
Stackhouse, Granville Cyril, B.Sc., 1964
Stafford, Gillian Ruth, B.A., with Honours in Latin, class II(ii), 1964
Stage, Ian Andrew Gordon, B.Sc., with Honours in electrical engineering, class III, 1962
Stagg, Kenneth Geoffrey, B.Sc., with Honours in mining, class II, 1959; Ph.D., 1963
Stamper, Harold Terence, B.Sc., with Honours in civil engineering, class III, 1963
Stanley, Ann Elizabeth, B.A., with Honours in general studies, class II(ii), 1963
Keith Alan, B.Sc. (*in absentia*), 1962
Margaret Ann, B.A., with Honours in French, class II(i), 1962
Stanton, Barbara, B.A., with Honours in German, class III, 1964
Diane Margaretta, B.A., with Honours in sociology, class II(ii), 1961
Michael Philip, B.A., with Honours in general studies, class II(i), 1962
Stanway, David, B.Sc., 1961
Stanwell, Richard, B.A., in special studies (German), 1962
Staples, George Wallis, B.Ch.D., 1962
Starkie, Granville Lewis, B.Sc., with Honours in chemical engineering, class III, 1962
Starmer, Barbara Muriel, B.A., with Honours in general studies, class III, 1962
Statham, Jeremy Peter, B.Sc., with Honours in chemistry, class III, 1964
Staveley, Malcolm George, B.Sc., with Honours in physics, class I, 1964
Stead, David John, B.Sc., in special studies (pharmacy), 1964
Steel, Keith Alan, B.Sc., with Honours in civil engineering, class II(ii), 1961; Ph.D., 1964
Reginald George Robert, B.A., with Honours in Russian, class II(ii), 1963
Steele-Childe, John Richard, B.Sc., with Honours in psychology, class II(ii), 1964
Steggals, John Thomas, B.Sc., with Honours in mathematics, class II(ii), 1964
Stelfox, John Garth, B.Sc., in special studies (chemistry), 1962

Stenton, Ann, B.A., with Honours in economics, class III, 1961
Stephens, Donald Michael, B.Sc., with Honours in metallurgy, class II(ii), 1964
James Edwin, M.A., with distinctions, 1963
Patricia Joyce, B.A., with Honours in music, class II(ii), 1964
Terence, B.Sc., 1964
Stephenson, Brenda, B.A., with Honours in classics, class III, 1961
Geoffrey Brian, B.Ch.D., 1961
Geoffrey Reginald, B.Sc., with Honours in general studies, class II(i), 1962
Stepto, Walter Donald, B.Sc., 1964
Stevens, William Jervis, B.A., with Honours in general studies, class II(ii), 1961
Stevenson, Colin, B.Sc., with Honours in metallurgy, class II(ii), 1962
Stevenson, Janet Margaret, B.Sc., with Honours in general studies, class II(ii), 1964
Lionel David, B.A., with Honours in modern languages, class III, 1961
Paul William, B.Sc., with Honours in physics, class II(i), 1961
Peter Robert, B.Com., with Honours, class III, 1964
Robert Leslie, B.Sc., with Honours in chemical engineering, class III, 1962
Steward, Anthony Ernest, B.Sc., 1961
Michael Wilfred, B.Sc., with Honours in biochemistry, class I, 1964
Stewart, Adrian Irvine Douglas, B.Sc., with Honours in mathematics, class II(ii), 1963
Still, Malcolm Edwin, B.Sc., 1962
Stirrup, Elizabeth Anne Buner, B.A., with Honours in sociology, class II(ii), 1962
Stockdale, John, B.Sc., 1962
Stocks, Christine Hilary, B.Sc., with Honours in physics, class III, 1962
John Barrie, B.Sc., with Honours in civil engineering, class II(ii), 1961
Stoddart, Patricia Lyn, B.A., with Honours in psychology, and sociology, class III, 1964
Stoker, John Brandon, M.B., Ch.B., with Honours, class II, 1961
Margaret Jane, B.Sc., with Honours in botany, class II(ii), 1963
Stone, Barbara Mary, B.Sc., with Honours in general studies, class III, 1962
Bernard David, Ph.D., 1963
Stones, Caroline Margaret, B.Sc., with Honours in mathematics, class III, 1964
John Neville, B.Sc., with Honours in agricultural studies, class II(i), 1961
Stopher, David Anthony, B.Sc., with Honours in biochemistry, class II(i), 1957; Ph.D., 1960
Storr, Gerard Lawrence, B.Sc., with Honours in agricultural studies, class II(ii), 1963
Stotland, Jack Alexander, B.Sc., with Honours in chemical engineering, class III, 1962
Stow, Gordon William, B.Sc., with Honours in textile industries, class II, 1958; M.Sc., 1962
Strachan, John, B.Sc., with Honours in agriculture, class II(ii), 1964
Straffen, Robert, B,Sc., with Honours in general studies, class II(ii), 1964
Stranack, Richard Nevill, B.A., in general studies, 1963
Stratford, Joseph Robin, B.Sc., with Honours in general studies, class III, 1961
Street, Arthur James, B.Sc., 1962
George Bryan, B.Sc., with Honours in chemistry, class II(ii), 1959; Ph.D., 1962
Streeter, Mrs. Dorothy Jane, M.Sc., 1960
Stride, Janet, B.A., with Honours in French, class II(ii), 1961
Stripe, Margaret Helen, B.A., with Honours in sociology, class II(i), 1962
Strugnell, John Richard, M.A., 1961
Strutt, David Peter Gerald, B.A., in combined studies (philosophy and subsidiary French), 1964
Stuart, Duncan Reginald, B.Sc., with Honours in chemical engineering, class II(i), 1963
Michael Hillier, M.B., Ch.B., 1962
Stubbs, Colin Anthony, B.Com., with Honours, class II(i), 1961
Peter, B.Sc., with Honours in metallurgy, class III, 1963
Stubbins, Vicki Ann, B.Sc., with Honours in chemistry, class III, 1964
Stubley, Edward Anthony, B.A., with Honours in economics, class III, 1964
Stuchfield, Michael Frank, B.Sc., with Honours in metallurgy, class III, 1961
Studd, John Robert, B.A., with Honours in history, class II(i), 1963
Stupples, Peter Cecil, B.A., with Honours in Russian, class II(ii), 1963

Sturman, David, B.Sc., with Honours in physics, class II(ii), 1961
Stuttard, James Peter, B.Sc., with Honours in general studies, class III, 1961
Mrs. Kathleen Mary, B.Sc., 1963
Stumpf, Imre Bela, B.Sc., with Honours in mining, class II(i), 1961
Sturtridge, Gillian, B.A., with Honours in general studies, class II(ii), 1961
Styles, Graham Alfred, B.Sc., with Honours in physics, class I, 1961
Sugars, Roland Edward Charles, B.A., with Honours in general studies, class II(i), 1964
Sugden, John Philip, B.Sc., 1964
Margaret Elizabeth, B.A., with Honours in English, class II(ii), 1962
Sullam, Ronald, B.Sc., 1964
Sulman, Edward, B.Com., with Honours, class II(ii), 1961
Summerhayes, Clive Quentin, B.Sc., with Honours in civil engineering, class II(i), 1962
Summers, Bryan William, B.A., with Honours in general studies, class III, 1961
John Harry, B.Sc., with Honours in chemical engineering, class II(ii), 1962
Sumner, Margaret Eileen, B.A., with Honours in geography, class II(ii), 1961
Sunderland, Bronwyn, B.A., with Honours in general studies, class II(ii), 1964
Philip, B.Sc., with Honours in chemistry, class I, 1961
Supple, Edmund Gerard, B.A., with Honours in general studies, class III, 1961
Surtees, David Frederick, B.Sc. (*in absentia*), 1962
Sutcliffe, Lesley Jean, B.A., with Honours in English, class II(ii), 1964
Malcolm, B.A., with Honours in French, class II(ii), 1950; M.A., 1961
Olive Margaret, B.A., with Honours in modern languages, class II(ii), 1964
Peter, B.Sc., in general studies, 1963
Sutherland, Ian Ronald, B.Sc., with Honours in civil engineering, class II(ii), 1961
Peter John, B.A., with Honours in economics, class II(i), 1964
Suttie, Andrew Beresford, B.Sc., with Honours in chemistry, class II(i), 1962
Sutton, Maxwell McLauchlan, B.Sc., with Honours in chemistry, class II(ii), 1961; M.Sc., 1963
Sved, Paul Thomas, B.Sc., 1962
Swain, Colin Alan, B.Sc., with Honours in biochemistry, class II(i), 1961
David Lewis, B.A., with Honours in economics and politics, class II(ii), 1964
Swallow, Arnold Graham, Ph.D., 1962
Julia, M.B., Ch.B., 1961
Swamy, Dalip Singh, M.A. (*in absentia*), 1964
Swan, Anthony Victor, B.Sc., with Honours in general studies, class I, 1964
Timothy, B.Sc., with Honours in chemistry, class II(i), 1963
Swann, David Anthony, Ph.D., 1963
Swanson, Judy Elizabeth, B.Sc., with Honours in general studies, class II(ii), 1964
Sweeting, Rachael Lee, B.A., with Honours in theology, class II(i), 1964
Sweetman, Anne Frances, B.A., with Honours in Russian, class II(ii), 1964
Swift, John Alan, B.Sc., with Honours in chemistry, class III, 1959; Ph.D., 1963
Michael George, B.A., with Honours in geography, class II(i), 1962
Robert Stokes, LL.B., with Honours, class III, 1961
Swinburne, John Warwick, B.Sc., with Honours in general studies, class III, 1962
Swindells, Barbara, B.A., with Honours in general studies, class II(ii), 1961
Swinscoe, John Charles, B.Sc., with Honours in biochemistry, class II(ii), 1964
Sykes, Beryl, B.A., with Honours in English, class III, 1963
Christopher John Dyson, B.Ch.D., 1963
James Anthony William, B.Sc., with Honours in colour chemistry, class III, 1956; M.Sc., 1961
Janet Eileen, B.A., with Honours in general studies, class II(i), 1962
John Christopher, B.Sc., with Honours in physics, class II(ii), 1963
John Howard, B.Sc., 1964
Trevor, M.B., Ch.B., 1963
Symington, Rodney Terence Kinnear, B.A., with Honours in German, class I, 1963
Szeri, Andras Zoltan, B.Sc., with Honours in mining, class I, 1960; Ph.D., 1962

Tabner, Ronald William, B.A., with Honours in economics, class II(ii), 1962
Tait, Ian Andrew, B.Sc., with Honours in civil engineering, class II(ii), 1964
Kenneth, B.Sc., with Honours in mathematics, class II(ii), 1964
Stuart McDougal, B.Sc., 1963
Talbot, James Richard, B.Sc., with Honours in chemical engineering, class II(i), 1963
Jean Maude, B.A., with Honours in general studies, class III, 1962
Norman Clare, Ph.D., (*in absentia*), 1963
Peter Ian, B.Sc., 1964
Valerie, B.A., with Honours in philosophy, class III, 1964
Tamale-Ssali, Christopher Edward, B.Sc., with Honours in geology, class II(ii), 1961
Tarin, David Pervez, B.Sc., with Honours in anatomy, class I, 1961
Tarling, Fiona Margaret, B.A., with Honours in geography, class II(ii), 1962
Tarry, John Frederick, B.Sc., with Honours in electrical engineering, class II(ii), 1963
Tatham, Marcel André Armand, B.A., with Honours in French, class II(i), 1963
Tattersfield, Charles Roger, B.Sc., with Honours in chemistry, class II(i), 1964
Taylor, Barrie Frederick, B.Sc., with Honours in biochemistry, class II(ii), 1962
Brian, B.Sc., with Honours in general studies, class I, 1959; M.Sc., 1964
Bruce, B.Sc., with Honours in physics, class II(ii), 1964
Carole, B.Sc., with Honours in chemistry, class III, 1963
Carol Enid, B.A., with Honours in English, class II(ii), 1964
David Lees, B.A., in special studies (theology), 1963
David Ronald, B.Sc., with Honours in mechanical engineering, class III, 1962
David Stewart, B.Sc., with Honours in psychology, class II(i), 1964
Esther Irene, B.Sc., with Honours in mathematics, class I, 1961
Geoffrey, B.Sc., with Honours in textile chemistry, class II(i), 1961
Gerald James, B.Sc., 1964
Gillian Armstrong, B.A., with Honours in French, class III, 1962
Graham Forbes, B.A., with Honours in economics, class II(ii), 1961
Iain Cooper, B.A., with Honours in geography, class II(i), 1964
Jack, B.Sc., with Honours in botany, class III, 1963
James Anthony, B.A., with Honours in general studies, class III, 1961
Jean, B.A., with Honours in general studies, class II(ii), 1961
Joan Helen, B.A., with Honours in Russian, class III, 1963
John Edwin, B.Sc., with Honours in leather science, class II(ii), 1963
Malcolm Hathaway, B.Sc., wtih Honours in general studies, class III, 1964
Michael Lawrence, B.Ch.D., 1964
Michael Noel, B.Sc., with Honours in general studies, class II(i), 1962
Peter Antony Christopher, B.Sc., 1963
Peter George, B.Com., with Honours, class II(i), 1964
Richard Davis, LL.B., with Honours, class II(ii), 1963
Richard James, B.Sc., with Honours in mechanical engineering, class II(ii), 1964
Robert Andrew, B.Sc., with Honours in chemistry, class II(ii), 1963
Robin Lindsley, B.Sc., with Honours in physics, class II(ii), 1962
Roy, B.Sc., with Honours in mechanical engineering, class I, 1961
Sylvanus Dandeson, B.A., with Honours in English, class II(ii), 1964
Thomas Malcolm, B.Sc. (agricultural studies), 1961
Tom Davies, B.Sc., 1963
Tazuke, Shigeo, Ph.D. (*in absentia*), 1962
Teale, Bruce Frederick, B.Sc., with Honours in civil engineering, class II(i), 1964
Teather, Brian Walter, B.Sc., in special studies (physics), 1962
Tebbit, Peter Raymond, B.A., in special studies (French), 1962
Tebble, Robert Soulsby, Ph.D., 1948; D.Sc., 1961
Teed, Christopher Andrew, B.Com., 1963
Teff, Ian Alexander, B.Ch.D., 1962
Tekin, Erdogan, B.Sc., with Honours in metallurgy, class III, 1961
Temple, John, B.Sc., with Honours in civil engineering, class III, 1962
Templeman, Alan Michael, B.Sc., 1963
Templeton, Catherine Young McCallum, B.A., with Honours in English, class II(i), 1964

Tennant, John, B.A., with Honours in general studies, class II(i), 1961
Margaret, B.A., with Honours in history, class III, 1962
Tenwick, Marjory Elizabeth, B.A., with Honours in sociology, class II(ii), 1964
Tevlin, John, B.Sc., with Honours in chemistry, class III, 1964
Tew, Elizabeth Yvonne, B.Sc., in general studies, 1962
Thackeray, Brian, B.Sc., 1961
Thewaini-Ali, Abdul Jalil, Ph.D., 1962
Thirlwall, Anthony Philip, B.A., with Honours in economics, class II(i), 1962
Thirsk, Anne Christine, B.A., with Honours in general studies, class III, 1963
Thirunavukkarasu, Sathiamalar, M.B., Ch.B., with Honours, class II, 1964
Thistleton, Alan Martin, B.Sc., 1961
Thoday, Peter, B.Sc., with Honours in mathematics, class II(ii), 1964
Thomas, Anne Felicity, B.A., with Honours in Spanish, class II(i), 1963
Christine Mary, B.A., with Honours in modern languages, class III, 1962
Ernest Hilton, B.Sc., with Honours in physics, class II(i), 1962
Gordon Lloyd, B.A., with Honours in English, class II(ii), 1963
Graham Stanley Philip, B.Sc., 1961
Jacqueline Mary, B.Sc., with Honours in chemistry, class II(i), 1964
James Robin, B.Sc., with Honours in chemistry, class II(ii), 1963
Jennifer Ann, B.Sc., with Honours in chemistry, class II(ii), 1962
Joyce, B.A., with Honours in Semitic languages and literatures, class II(i), 1961
Magnus Eric Kosonike, Ph.D., 1960
Maldwyn, B.Sc., with Honours in mathematics, class III, 1964
Mrs. Molly, Ph.D. (*in absentia*), 1960
Peter Eyton, B.Sc., with Honours in metallurgy, class II(i), 1961
Ralph, Ph.D., 1962
Thompson, Allen Dudley, B.A., with Honours in Italian, class II(ii), 1961
Ann, B.A., with Honours in French, class III, 1961
Anthony Robin, B.A., with Honours in German, class III, 1961
Brian, B.Sc., with Honours in civil engineering, class II(i), 1962
Christopher John Galton, B.Sc., with Honours in civil engineering, class II(ii), 1962
Colin, Ph.D. (*in absentia*), 1961
David Stuart, M.Sc., 1960
Denys Ridley, B.Sc., with Honours in anatomy, class I, 1963
Eric Wilcock, B.Sc., with Honours in general studies, class I, 1963
Frank, B.Sc., with Honours in physics, class II(i), 1961
Gillian, B.Sc., in special studies (chemistry), 1962
Graham, B.Sc., with Honours in mechanical engineering, class III, 1961
John, B.Sc., with Honours in biochemistry, class I, 1964
Michael Geoffrey, B.Sc., with Honours in physics, class I, 1957; Ph.D., 1960
Norman Maxwell, B.Sc., 1961
Robert, LL.B., with Honours, class II(ii), 1963
Stanley Michael, B.Ch.D., 1964
Vivian Lisle, B.Sc., with Honours in general studies, class III, 1963
Vivienne Margaret, B.A., with Honours in philosophy and English literature, class II(ii), 1964
Thomson, Jean Mary Woods, B.Sc., with Honours in biochemistry, class III, 1963
Jeremy Clayton, B.A., with Honours in textile management, class III, 1962
John, B.Sc., with Honours in general studies, class II(ii), 1962
Thorley, Robert William, B.Sc., with Honours in physics, class II(ii), 1962
Thornber, Mary, B.A., with Honours in French, class II(ii), 1962
Thornburn, Christopher Cheveley, B.Sc., with Honours in agricultural chemistry, class II(i), 1958; Ph.D., 1962
Thorneley, Mary Elizabeth, B.A., with Honours in textile design, class II(ii), 1964
Thornton, Anne Constance, B.Sc., with Honours in general studies, class I, 1962
Dennis, B.Sc., with Honours in mechanical engineering, class III, 1962
Geoffrey Hugh Ronald, LL.B., 1961
Heather Lavinia, B.A., with Honours in general studies, class III, 1961

Thornton, Richard David, B.Sc., with Honours in ceramics, class II(ii), 1964
Thomas David, B.A., in general studies, 1961
Thorp, Charles Roland, B.Sc., with Honours in general studies, class II(ii), 1964
Thorpe, Barry, B.A., with Honours in Latin, class II(ii), 1962
Ernest John, B.Sc., 1961
Judith Ann, B.A., with Honours in English, class II(i), 1964
Roger William Seager, B.A., in general studies, 1962
Thorsteinsson, Thorsteinn, B.A., with Honours in general studies, class III, 1962
Threadgould, John Harry, B.Ch.D., 1961
Thwaites, James David, B.Sc., with Honours in chemistry, class II(i), 1960; Ph.D. (*in absentia*), 1964
Tickle, Peter Alexander, B.Sc., 1961
Tideman, Christopher Charles Siddons, B.A., with Honours in economics, class III, 1962
Till, Janet Mary, B.Sc., with Honours in chemistry, class II(ii), 1964
Tilling, Philip Michael, B.A., with Honours in English, class II(i), 1961
Timmis, Joy Eleanor, B.A., with Honours in English, class II(ii), 1963
Tinkler, Gerald Anthony, B.A., with Honours in general studies, class III, 1961
Tiryaki, Sabri, B.Sc., 1964
Titley, Diana Elizabeth, B.A., with Honours in English, class II(ii), 1964
Titterton, Catherine Nora, B.Sc., with Honours in physics, class II(ii), 1963
Dorothy, B.Sc., with Honours in botany, class II(i), 1964
Tod, James Alexander, B.Sc., with Honours in civil engineering, class II(ii), 1963
Todd, Alwyn Edward, M.B., Ch.B., 1960
Geoffrey Stanley, B.Sc., with Honours in colour chemistry, class II(i), 1963
John Francis James, B.Sc., with Honours in chemistry, class I, 1959; Ph.D., 1963
Katherine Mary, B.A., with Honours in geography, class III, 1962
Peter Malcolm, B.Sc., with Honours in agricultural chemistry, class II(i), 1964
Tolley, Harry, B.A., with Honours in geography, class II(i), 1958; M.A., 1962
Tomalin, Geoffrey, B.Sc., with Honours in chemistry, class II(i), 1963
Tomlinson, David Edward, LL.B., with Honours, class III, 1962
John Keith, B.Sc., with Honours in zoology, class II(ii), 1962
John Peter, B.Sc., with Honours in general studies, class II(ii), 1961
Tong, David Arthur, B.Sc., with Honours in chemistry, class II(i), 1962
Toothill, Colin, Ph.D., 1961
Topham, John Calton, B.Sc., with Honours in general studies, class II(i), 1962
Torode, Peter Francis, B.A., with Honours in sociology, class II(ii), 1963
Toshun, Titus Omobamidele, LL.B., with Honours, class III, 1961
Tothill, Geoffrey Allen, B.Sc., 1964
Totten, Henry Malcolm Samuel, B.A., in special studies (theology), 1962
Tough, Mrs. Yvonne Avice Dorothy Joan, M.A., 1963
Towers, Lee, B.Sc., with Honours in physics, class II(i), 1963
Towl, Jack, B.Sc., 1963
Towler, Kenneth George, B.Sc., with Honours in agricultural studies, class II(i), 1963
Robert Charles, B.A., with Honours in psychology and sociology, class II(ii), 1964
Town, Philip John, B.Sc., with Honours in chemistry, class III, 1963
Townend, Michael, M.B., Ch.B., with Honours, class II, 1962
Ruth Anne, M.B., Ch.B., 1963
Townrow, Margaret Ruth, B.A., with Honours in general studies, class III, 1962
Townsend, Timothy, B.Sc., 1962; M.Sc., 1964
Townsley, John Duncan, B.Sc., with Honours in biochemistry, class II(ii), 1958; Ph.D., 1961
Tozer, Mary Janet, B.Sc., with Honours in agricultural economics, class II(ii), 1964
Tracy, Claire Elizabeth, B.A., with Honours in English, class II(ii), 1962
Train, Peter William, B.Sc., with Honours in chemical engineering, class II(ii), 1963
Tran, Mrs. Joyce Marie, B.A., with Honours in French, class II(ii), 1963
Tranter, Geoffrey, B.A., with Honours in general studies, class II(ii), 1964
Robert Samuel, B.Sc., 1963

Tremlett, Raymond John, B.Sc., with Honours in the chemistry of leather manufacture, class II(i), 1962
Trickey, David Stuart, B.Sc., with Honours in chemistry, class II(i), 1962
Triffitt, Judith Helen, LL.B., with Honours, class III, 1964
Trotman, Stella Margaret, B.A., with Honours in general studies, class III, 1961
Trotter, Irene Margaret, B.A., with Honours in philosophy and English literature, class III, 1964
Robert James Frederick, Ph.D., 1962
Troupe, Yvonne Patricia, B.A., with Honours in theology, class III, 1963
Trudgill, David Lawson, B.Sc., with Honours in agricultural zoology, class II(i), 1964
Peter William, B.Sc., with Honours in biochemistry, class II(i), 1959; Ph.D., 1962
Trueman, Alfred Barrie, B.A., with Honours in Latin with French, class II(ii), 1957; M.A., 1964
Colin Nigel, B.Sc., with Honours in metallurgy, class II(ii), 1964
Tseung, Alfred Chan Chung, Ph.D., 1962
Tuck, William, B.Sc., with Honours in civil engineering, class III, 1962
Tucker, David Charles, B.Sc., with Honours in civil engineering, class II(ii), 1961
Frederick George, B.Sc., with Honours in chemical engineering, class II(i), 1963
Jean, B.Sc., with Honours in general studies, class I, 1963
Tuckwood, Dorothy Helen, B.A., with Honours in sociology, class III, 1962
Tugwell, Alison, B.Com., with Honours, class II(ii), 1961
Tuliani, Shyam Sunder, M.Sc., 1963
Tulloch, Barrie Charles, M.B., Ch.B., 1963
Ian Robert, B.Sc., with Honours in physics, class II(ii), 1962
Tunnicliffe, Nigel William, B.Sc. (agricultural studies), 1961
Turetsky, Morris, Ph.D., 1963
Türkes, Yilmaz, B.Sc., with Honours in textile engineering, class III, 1963
Turnbull, Kenneth, B.Sc., with Honours in chemical engineering, class I, 1962
Robin, B.Sc., 1962
Turner, Barry Ivan, B.Sc., in special studies (mathematics), 1961
Christopher William, B.Com., with Honours, class II(ii), 1961
Colin Hugh Frederick, LL.B., with Honours, class III, 1961
Derek Clifford, B.Com., with Honours, class II(i), 1961
Ian James, LL.B., 1962
Ian Jeremy, B.Sc., 1963
Jane, B.A., with Honours in philosophy and English, class III, 1962
John, B.Sc., 1961
John David, M.Sc., 1961
John Maxwell, B.Sc., with Honours in agricultural studies, class II(ii), 1961
Joyce, B.Sc., with Honours in chemistry, class II(i), 1961
Keith Ledgard, B.A., with Honours in geography and politics, class II(ii), 1964
Michael Francis, B.A., in special studies (French), 1961
Turnock, Geoffrey, B.Sc., with Honours in biochemistry, class I, 1961; Ph.D., 1964
Turton, Derek James, B.A., with Honours in French, class II(i), 1964
Patricia Anne, LL.B., with Honours, class II(i), 1961
Turton-Hart, Penelope Jane, B.A., with Honours in sociology, class III, 1962
Turver, Keith Edward, B.Sc., with Honours in physics, class I, 1960; Ph.D., 1963
Tweddle, Eric Newton, B.Sc., with Honours in chemistry, class II(ii), 1961
Tweedale, Jean, B.Sc., 1964
Tweedle, Barrie Norman, B.Sc., 1964
Twentyman, Thomas George, B.A., with Honours in English, class II(i), 1961
Tyldesley, Graham, B.Sc., 1962
Tyler, Derek Edward, B.Sc., with Honours in metallurgy, class II(ii), 1962
Richard Erwin Godric, B.A., with Honours in fine art and philosophy, class II(i), 1964
Robin Leonard Warren, B.Sc., with Honours in civil engineering, class I, 1962
Tysoe, Richard William, B.Sc., in general studies, 1962
Tyson, Eleanor Joan, B.Sc., 1964

Tyson, Hilary Alda, B.A., with Honours in English and history, class II(ii), 1964
Sheila, B.A., with Honours in Latin, class I, 1961
Tyzack, Michael Roger, LL.B., with Honours, class II(ii), 1963

Uden, Anthony William, B.A., with Honours in history, class II(i), 1964
Udom, Gertrude Ifunanya, LL.B., with Honours, class II(ii), 1964
Udomsakdhi, Bancha, Ph.D., 1964
Underwood, David Rhodes, B.Sc., with Honours in mechanical engineering, class III, 1961
Unsdorfer, Julius, Ph.D., 1962
Unsworth, Joseph, B.Sc., with Honours in physics, class II(i), 1964
Upadhyay, Prafulchandra Bhalchandra, Ph.D. (*in absentia*), 1963
Upadhyaya, Satya Deo, B.Sc., 1961
Upshaw, Dorothy, B.A., with Honours in sociology, class II(ii), 1962
Ure, Kenneth Alastair, B.A., with Honours in general studies, class II(ii), 1961
Urruty, Jean-Pierre, M.B., Ch.B., 1964

Vaigo, August, Ph.D., 1964
Vail, John Randolph, Ph.D., 1960
Vale, John Cyril, B.A., with Honours in sociology, class III, 1964
Valentine, David Angus, B.Sc., with Honours in physiology, class I, 1962
Michael Robert, B.Sc., with Honours in mechanical engineering, class III, 1964
Vallely, Francis, B.Sc., with Honours in chemistry, class II(ii), 1957; Ph.D., 1961
Vamplew, Annette, B.A., with Honours in history, class III, 1961
Van Issum, Ernst Johannes, M.Sc., 1963
van Keulen Brons, Cornelis Antonius, M.Sc. (*in absentia*), 1962
van Wyk, Theunis Petrus, M.Sc. (*in absentia*), 1962
Varley, Anne Rosemary, B.A., with Honours in general studies, class III, 1961
James Frederick, B.Sc., with Honours in chemical engineering, class II(i), 1961
Kenneth Roger, B.Com., with Honours, class II(i), 1964
Reginald John, B.Sc., with Honours in mechanical engineering, class I, 1964
Rodney, B.Sc., with Honours in chemistry, class II(i), 1961
Varlioglu, Fikret, B.Sc., 1962
Varma, Dharmendra Singh, M.Sc., 1961
Varty, Alan, B.Sc., with Honours in general studies, class II(ii), 1961
Vaughan, Mrs. Marie, M.B., Ch.B., 1963
Vaux, Colin Geoffrey, LL.B., with Honours, class II(i), 1963
Veal, Douglas Charles, Ph.D., 1963
Velody, Irving, B.A., with Honours in sociology and philosophy (*aegrotat*), 1963
Venkatachalapathy, Ramasamy, B.Sc., 1964
Venn, John Henry Louis, B.Sc., with Honours in chemistry, class III, 1961
Vernon, Helen Ridings, B.A., with Honours in history, class II(i), 1964
John Paxton, M.B., Ch.B., 1964
Vickers, Anthony Leonard, B.Sc., with Honours in fuel science, class II(i), 1964
Dorothy June, B.A., with Honours in French, class II(ii), 1963
Terence, M.B., Ch.B., 1960
Vihari, Vijoy, B.Sc., 1963
Villers, Mrs. Milda, B.A., with Honours in textile design, class I, 1958; M.A., with distinction, 1960
Vincent, Ivor William, B.A., in special studies (French), 1962
Margaret Mary, B.A., in special studies (sociology) (*aegrotat*), 1964
Norman, B.Sc., 1964
Viner, Elizabeth Mary, B.A., with Honours in sociology, class II(ii), 1961
Vines, Herbert Dearden, B.Sc., 1961
Vinnicombe, Paul James Turgoose, B.A., with Honours in English, class II(ii), 1963
von Eynern, Friedrich Wolfgang, B.A., with Honours in textile design, class II(ii), 1961

Von Knorring, George, LL.B., 1964
Vowles, Bernard Wilfred Alan, B.A., with Honours in modern languages, class III, 1961
Terence Rodney, B.Sc., with Honours in mechanical engineering, class II(ii), 1964
Vural, Mazhar Yurdakul, B.Sc., 1962

Wade, Philip, B.Sc., 1962
Wadsworth, David John, M.B., Ch.B., 1960
Eileen, B.A., with Honours in geography, class III, 1963
Michael Edwin John, B.A., with Honours in English (*aegrotat*), 1963
Wagstaff, Anthony Cliffe, B.A., with Honours in Spanish, class III, 1964
Wainwright, Allan, B.Sc., 1964
Fred, M.Sc., 1961
Norman, B.Sc., with Honours in physics, class III, 1961
Paul, B.Sc., with Honours in colour chemistry, class II, 1957; Ph.D., 1961
Waite, Geoffrey Alfred, LL.B., with Honours, class II(ii), 1961
Wakefield, Sylvana Margareta Baeck, B.Sc., with Honours in general studies, class II(ii), 1962
Wakelin, Martyn Francis, B.A., with Honours in English, class II(i), 1959; M.A., with distinction, 1960
Walden, Faye, M.B., Ch.B., 1962
Wales, John Kenneth, M.B., Ch.B., 1960
Walker, Anthony John, LL.B., with Honours, class II(ii), 1963
Barry Egerton, M.B., Ch.B., 1960
David Crosby, Ph.D. (*in absentia*), 1960
David George, B.Sc., 1964
David Malcolm, B.Sc., with Honours in chemistry, class I, 1958; Ph.D. (*in absentia*), 1961
Donald Graham, B.A., with Honours in general studies, class II(ii), 1963
Jean Marion, M.B., Ch.B., 1962
Josephine Ruth, LL.B., with Honours, class II(i), 1962
Mrs. (see also Thomas, Shirley Margaret) M.A., 1962
Norma Wendy, B.A., with Honours in general studies, class III, 1961
Pamela Janet, M.B., Ch.B., 1961
Pamela Strachan, B.A., with Honours in general studies, class III, 1963
Richard Benjamin, B.Sc., with Honours in chemical engineering, class III, 1963
William Graham, B.A., with Honours in geography, class II(i), 1963
Wallace, Gerald, B.A., with Honours in philosophy, class I, 1963
Waller, Eric Keith, B.Sc., with Honours in chemical engineering, class II(ii), 1963
Raymond Frederick, B.Sc., with Honours in chemical engineering, class II(ii), 1962
Wallington, Michael John, B.Sc., with Honours in physics, class I, 1964
Wallis, Rosemary Celia, B.Sc., in special studies (chemistry), 1964
Walls, John, M.B., Ch.B., 1963
Ronald, B.Sc., 1962
William David, M.B., Ch.B., 1960
Walmsley, Jack Berry, B.Sc., with Honours in chemistry, class III, 1961
Richard Searby, B.A., with Honours in general studies, class III, 1962
Walne, Michael, B.Sc., with Honours in physics, class II(ii), 1964
Walsh, Catherine Celia, B.Sc., with Honours in general studies, class II(ii), 1962
Christine (Mrs. Paine), B.A., with Honours in theology, class II(i), 1960
Gordon Raymond, B.Sc., with Honours in mathematics, class I, 1950; M.Sc., 1951; Ph.D., 1963
John Stuart, B.Sc., 1963
Michael Anthony, B.A., with Honours in history, class II(ii), 1963
Norman Gordon, B.A., with Honours in English, class III, 1963
Pauline, B.A., with Honours in history, class II(i), 1963
Thomas, B.A., with Honours in Spanish, class III, 1962

Walsh, Thomas Jeffrey, B.A., with Honours in English, class II(i), 1960; M.A., 1962
Walters, Anthony David, B.Sc., with Honours in general studies, class III, 1961
Brenda Ann, B.A., with Honours in geography, class II(ii), 1964
David John, B.A., with Honours in textile management, class I, 1963
John, B.Sc., with Honours in metallurgy, class II(ii), 1963
Walton, Anne, B.A., with Honours in economic history and geography, class II(ii), 1963
John Mawson, B.Sc., 1964
Katherine, Ph.D., 1963
Michael Trevor, B.Sc., with Honours in chemistry, class II(ii), 1963
Wannop, Ann Georgina Hornby, B.A., with Honours in economics, class II(ii), 1961
Wapshere, Anthony John, Ph.D., 1960
Ward, Barrie, B.Sc. (agricultural studies), 1961
Bernard Irving, B.A., with Honours in Latin, class II(i), 1961
Charles Philip, B.Sc., with Honours in chemistry, class III, 1959; Ph.D., 1964
David, B.A., with Honours in geography, class I, 1959; M.A. (*in absentia*), 1961
David, B.Sc., with Honours in civil engineering, class III, 1964
George Arthur, B.Sc., with Honours in colour chemistry, class I, 1962
Jacqueline, B.A., with Honours in psychology and sociology, class III, 1964
Jennifer Margaret, B.A., with Honours in English, class II(ii), 1962
John, B.A., with Honours in combined studies, class II(i), 1961
John Kenneth, B.Sc., with Honours in chemistry, class III, 1964
John Richard, B.A., with Honours in textile management, class II(ii), 1962
Marjorie, B.A., with Honours in general studies, class III, 1961
Pamela Christine, B.A., with Honours in theology, class III, 1963
Robert Carrington, B.A., with Honours in history, class II(ii), 1964
Terence Patrick, B.Sc., with Honours in civil engineering, class III, 1962
Thomas Malcolm, B.Sc., 1964
Trevor Charles, B.Sc., with Honours in mechanical engineering, class II(ii), 1961
William Bernard, B.Sc., with Honours in civil engineering, class II(ii), 1964
Ward-Smith, Richard Michael Anthony, B.Ch.D., 1964
Wardell, John, B.Sc., in general studies, 1958; Ph.D., 1964
Wardle, Christine Mary, B.A., with Honours in history, class II(i), 1964
Peter, B.Sc., with Honours in physics, class II(ii), 1961
Wardley, John Gordon, B.Sc., with Honours in civil engineering, class II(ii), 1961
Wardman, Peter, B.Sc., with Honours in chemistry, class II(i), 1964
Wareing, John, B.A., with Honours in geography, class II(i), 1961
Waring, John Jacob, B.Sc., with Honours in agricultural chemistry, class II(i), 1962
Warne, Arthur, B.A., with Honours in history, class II, 1935; M.A., 1937; Ph.D., 1964
Warner, Adrian Mark, B.Sc., with Honours in mechanical engineering, class III, 1961
Ian Robin, B.A., with Honours in Spanish, class I, 1963
Warren, Alan, B.Sc., in general studies, 1963
Warriner, Christopher John, B.Sc., 1964
Wass, Brian John, B.Sc., 1964
Waters, Janice Irene, B.A., in special studies (English), 1964
Waterworth, George Bernard, B.Sc., with Honours in civil engineering, class II(i), 1964
Watkin, Anton, B.Sc., with Honours in chemical engineering, class III, 1964
Keith, B.Sc., with Honours in colour chemistry, class I, 1963
Stanley Denton, B.Sc., 1961
Watkins, George Edward, B.Sc., with Honours in mining, class II(i), 1964
Margot Rosalind, B.A., with Honours in geography, class II(ii), 1964
Richard Anthony, B.A., with Honours in English, class II(i), 1961
Watkinson, Paul Trevor, B.Sc., 1962
Watson, Anthony Maurice Smith, B.A., with Honours in music, class II(i), 1964
Edna, B.A., with Honours in English, class II(ii), 1964
Henry Richard, B.A., with Honours in economics, class II(ii), 1963
Joan Alice, M.B., Ch.B., 1960
John David, B.Sc., with Honours in electrical engineering, class II(ii), 1964

Watson, John Unsworth, B.Sc., with Honours in agricultural studies, class II, 1958; Ph.D., 1961
Joseph John Henderson, B.Sc., with Honours in mechanical engineering, class I, 1962
Laurence, B.Sc., 1961
Michael Hill, B.Sc., with Honours in chemistry, class II(i), 1961
Patricia Joy Carole, B.Ch.D., 1964
Peter John, B.Sc., with Honours in chemical engineering, class III, 1964
Philip Donald, B.Sc., with Honours in mechanical engineering, class II(i), 1964
William David, B.Sc., 1963
Watt, Brian Fred, B.Sc., with Honours in chemistry, class II(ii), 1962
William Stewart, Ph.D. (*in absentia*), 1962
Watters, Catherine Mary Patricia, B.A., with Honours in sociology, class III, 1964
Watton, Carole Ann, B.Com., with Honours, class II(i), 1962
Watts, Catherine, B.A., with Honours in German, class III, 1963
Denis, John Louis, B.Sc., with Honours in civil engineering, class II(ii), 1964
Ian Terence, B.A., in special studies (Latin), 1962
John Robert, B.Sc., with Honours in physics, class II(i), 1960; M.Sc., 1963
Waugh, Brian, B.Sc., with Honours in geology, class II(ii), 1962
Wealand, Eileen Rose, B.A., in general studies, 1964
Wearing, George Michael, B.A., with Honours in theology, class II(i), 1958; M.A., 1963
Wears, Mrs. Brenda, B.A., with Honours in French, class II(ii), 1963
Margaret Anne, B.A., with Honours in French, class II(ii), 1964
Weatherall, Anne, B.A., with Honours in English, class II(ii), 1963
Weatherhead, Calvin, B.A., with Honours in general studies, class III, 1961
Webb, Mrs. Margaret Jane, B.Sc., with Honours in general studies, class III, 1962
John Stuart, B.Sc., with Honours in physics, class II(ii), 1962
Michael John, B.Sc., with Honours in physics, class II(ii), 1961
Webber, John Henry, B.Sc., 1962
John Henry, B.Sc., 1963
Jane, B.A., with Honours in sociology, class II(ii), 1963
Webster, Lorna, B.A., with Honours in sociology, class III, 1961
Roger, B.Sc., with Honours in mathematics, class II(i), 1961
Trevor, LL.B., with Honours, class III, 1960
Weech, Deborah Jane, B.Sc., with Honours in pharmacy, class II(i), 1964
Welburn, Vivienne Carole, B.A., with Honours in general studies, class II(i), 1962
Welch, Andrew Francis, B.Sc. (agricultural studies), 1963
Christine Margaret, B.A., with Honours in English, class II(ii), 1964
Daphne Geraldene, B.A., in special studies (sociology), 1962
Patrick Frederick, B.Sc., 1964
Welford, John Anthony, B.Sc., with Honours in physics, class I, 1961
John Francis, B.Ch.D., with Honours, class II, 1964
John Ronald, B.Sc., with Honours in general studies, class II(ii), 1961
Welham, Geoffrey Martyn, M.B., Ch.B., 1964
Wells, James, B.Sc., with Honours in mechanical engineering, class II, 1953; M.Sc., 1962
John Edward, B.Sc., with Honours in civil engineering, class II(ii), 1962
Raymond, B.A., with Honours in economics, class II(ii), 1963
Robin Derek Headlam, B.A., with Honours in English, class I, 1964
Welsby, Richard John, B.Sc., with Honours in civil engineering, class III, 1963
Welsh, Hazel Catherine, B.Sc., 1963
Wendel, Klaus, B.Sc., with Honours in civil engineering, class III, 1962
Wenman, Graham John, B.Sc., 1961
West, Brian Geoffrey, B.Sc., with Honours in physics, class II(ii), 1962
Frank, B.A., with Honours in sociology and philosophy, class II(i), 1964
Peter Edward, M.Sc., 1962
Westcott, Brian, B.Sc., with Honours in mathematics, class II(ii), 1962
Westmoreland, Keith, B.Sc., with Honours in mining, class II(ii) (*in absentia*), 1962
Westney, Raymond John, LL.B., with Honours, class III, 1964
Weston, Gordon John, M.Sc., 1962

Weston, John Graham, B.Sc., with Honours in mining, class I, 1960; with Honours in mechanical engineering, class III, 1961
Michael, Ph.D., 1962
Wetherbee, Winthrop, M.A., with distinction (*in absentia*), 1962
Whalley, Patricia Mary, B.Sc., with Honours in physics, class I, 1961
Whamond, Pauline, B.A., with Honours in French, class III, 1964
Wharton, Colin Stanley, B.A., with Honours in English, class II(i), 1960; M.A., with distinction, 1962
Whatmore, Graham Copley, B.A., with Honours in modern languages, class III, 1961
Jane Ann, B.A., with Honours in English, class II(ii), 1962
Wheat, Thomas Anthony, B.Sc., with Honours in chemistry, class II(ii), 1962
Wheeler, Jeremy Charles Gardener, B.Sc., with Honours in physics, class II(i), 1964
John, B.Sc., with Honours in pharmacy, class II(i), 1964
Rupert Montagu, B.Sc., with Honours in mechanical engineering, class II(ii), 1962
Susan Mary, B.A., with Honours in English, class II(ii), 1964
Wheelhouse, Heather Lily Rose, B.Sc., with Honours in general studies, class I, 1961
Kathleen Ann, B.A., with Honours in general studies, class III, 1961
Whelan, Michael Francis, B.Sc., with Honours in physics, class II(ii), 1961
Whichelo, Christopher Edward Denis, B.Sc., in general studies, 1962
Whine, Lionel John, B.A., with Honours in economics, class III, 1964
Whinfrey, Kenneth George, B.Sc., 1964
Whitaker, Robin Grant, B.Sc., with Honours in general studies, class I, 1964
White, Alan, B.A., with Honours in Russian, class II(ii), 1962
Alan Charles Harry, B.Sc., 1963
Anthony Desmond, M.Sc., 1963
Elizabeth Jennifer, B.A., with Honours in English, class II(ii), 1964
Paul Jonathan, B.Sc., with Honours in mining, class II(i), 1960; Ph.D., 1963
Peter Murchie Finch, B.A., with Honours in general studies, class II(ii), 1963
Roger, B.Sc., with Honours in civil engineering, class II(i), 1963
Roger Ian Scott, B.A., with Honours in general studies, class II(ii), 1962
Sarah Swinburne, B.A., with Honours in Russian, class II(i), 1963
Thomas Alan, B.Sc., with Honours in mining, class III, 1963
Valerie Anne, M.B., Ch.B., 1962
William Rodney, B.Sc., with Honours in civil engineering, class I, 1962
Whitehead, John David, B.Sc., 1963
Martin Frederick, B.Sc., with Honours in mining, class II(ii), 1964
Whitehouse, Norman Harold, B.Ch.D., 1962
Whiteley, Ian, B.Sc., with Honours in electrical engineering, class II(i), 1964
Whiter, David, B.A., with Honours in general studies, class III, 1961
Whitfield, John, LL.B., with Honours, class II(i), 1963
Michael, B.Sc., with Honours in chemistry, class I, 1961
Richard Charles, B.Sc., with Honours in chemistry, class I, 1960; Ph.D., 1963
Whiting, Harold Thomas Anthony, M.A., 1964
Whitley, Edward John, B.A., with Honours in French, class III, 1962
Whitmore, Malcolm George, B.Sc., with Honours in electrical engineering, class II, 1958; M.Sc., 1962
Whittaker, Jack, B.Sc., with Honours in general studies, class II(ii), 1963
Malcolm George, M.B., Ch.B., 1962
Whittle, Aubrey Clifford, B.A., with Honours in geography, class II(ii), 1964
Jacqueline, B.A., with Honours in sociology, class II(i), 1963
Whitworth, David, B.Sc., with Honours in textile chemistry, class I, 1964
Michael, B.S., 1963
Mrs. (see Moore, Judith)
Rosemary, B.A., with Honours in Semitic languages and literatures, class II(i), 1963
Whomes, Terence Leslie, B.Sc., with Honours in mechanical engineering, class II(i), 1962
Wickham, George Arthur, Ph.D. (*in absentia*), 1963
Wiggin, David Ryle, B.Com., with Honours, class III, 1964
Wightman, Wilfred Eric, Ph.D., 1960

Wignall, John Michael, B.A., with Honours in geography, class III, 1963
Wilburn, Kenneth, LL.B., with Honours, class II (*in absentia*), 1963
Wilcsek, Agnes Sara, M.B., Ch.B., 1964
Wild, Derek, B.Sc., 1963
Wilde, Anthony Michael Brian, B.Sc., with Honours in civil engineering, class II(i), 1964
Clive Harry Whitworth, B.Sc., 1963
Ernest, B.Sc., with Honours in mathematics, class I, 1957; Ph.D., 1961
John Douglas, B.Sc., with Honours in chemistry, class II(i), 1963
Peter Frederick, B.Sc., with Honours in general studies, class II(ii), 1958; Ph.D., 1962
Wileman, Derek Hayden, B.Sc., with Honours in general studies, class II(i), 1962
Wiles, Michael, B.Sc., with Honours in zoology, class II(i), 1962
Terry Lowes, B.Sc. (agriculture), 1964
Wilford, Stanley Peter, B.Sc., with Honours in chemistry, class II(ii), 1955; Ph.D., 1963
Wilkerson, Valerie Anne, B.A., with Honours in philosophy and history, class II(i), 1962
Wilkins, Anthony John Joseph, B.Sc., with Honours in chemistry, class III, 1962
Ernest Joseph, B.Sc., with Honours in chemistry, class I, 1962
Kenneth Frederick, B.A., with Honours in music, class II(ii), 1962
Wilkinson, Alan Brooke, B.Sc., in general studies, 1962
David John, B.Sc., 1962
John Herbert David, Ph.D., 1963
Mary Zita, B.A., with Honours in sociology, class II(ii), 1962
Willetts, Christine Ruth, B.A., with Honours in music, class II(ii), 1964
Williams, Alwyn Lloyd, B.A., in general studies, 1961
Anthony, B.Sc., with Honours in colour chemistry, class III, 1962
Anthony Arthur, B.Sc., with Honours in chemistry, class II(ii), 1963
Charles, B.Sc., 1963
David, B.Sc., with Honours in civil engineering, class II(i), 1962
David Roger, B.Sc., with Honours in electrical engineering, class II(i), 1962
David Wyndham, B.Sc., with Honours in geology, class II(ii), 1961
Dudley Howard, B.Sc., with Honours in chemistry, class I, 1958; Ph.D. (*in absentia*), 1961
Edward James, M.B., Ch.B., 1960
Enid, B.A., with Honours in French, class III, 1964
Eric Barrie, B.Sc., in general studies, 1963
Eric John, B.Sc., in special studies (chemistry), 1964
Gareth Hywel, Ph.D., 1963
Granville, B.A., with Honours in English, class II(i), 1963
Henry Adrian, B.Sc., with Honours in metallurgy, class II(ii), 1962
Ian, B.Sc., with Honours in chemical engineering, class II(i), 1961
Joan, B.A., with Honours in French, class III, 1962
Joan Sandra, B.A., with Honours in English, class II(ii), 1962
John Alan, B.A., with Honours in history, class II(i), 1962
John David, LL.B., with Honours, class II(ii), 1963
Keith Brynley Frederick, B.A., with Honours in German, class II(i), 1962
Madeline Dorothy, B.A., with Honours in Latin, class III, 1962
Melvyn Charles, B.A., with Honours in general studies, class III, 1961
Michael John, B.Sc., with Honours in textile chemistry, class II(i), 1964
Peter, B.Sc., in general studies, 1961
Peter Leonard, B.Sc., with Honours in civil engineering, class II(ii), 1963
Ralph, B.A., with Honours in sociology, class III, 1961
Simone Marilyn, B.A., with Honours in Spanish, class II(ii), 1963
Stanley George, B.Sc., with Honours in chemistry, class II(i), 1961
Susan Gower, B.A., with Honours in English, class II(ii), 1961
Wendy Ann, B.A., with Honours in history, class II(ii), 1964
Williams-Mitchell, Robin Henry, B.Sc., with Honours in chemical engineering, class II(ii), 1962
Williamson, David Vincent Stewart, B.Sc., with Honours in gas engineering, class I, 1958; Ph.D., 1961

Williamson, Donald Mortimer, M.B., Ch.B., with Honours, class II, 1958; M.D., 1962
Frank Oliver, B.A., with Honours in general studies, class II(ii), 1962
Margaret Anna, B.A., with Honours in geography, class II(ii), 1962
Willis, Anthony Clive, B.Sc., with Honours in mining, class II(ii), 1962
Ian William, B.A., with Honours in textile design, class II(i), 1963
Keith, B.A., with Honours in economics, class III, 1961
Wilmshurst, Beverley Robley, B.Sc., with Honours in chemistry, class I, 1950; M.Sc., 1953; Ph.D., 1963
Wilshaw, Ian George, B.Sc., with Honours in civil engineering, class II(i), 1962
Wilson, Albert, B.Sc., 1960
Alan Rhodes, Ph.D., 1964
Arthur Richard, LL.B., with Honours, class II(ii), 1961
Carolyn Kilday, B.A., with Honours in French, class II(ii), 1963
David Anthony, B.Sc., with Honours in mechanical engineering, class II(ii), 1962
David Stanley, B.A., with Honours in English, class III, 1963
Eveline, B.Sc., with Honours in mathematics, class II(ii), 1964
Frank Arnal, B.Sc., with Honours in agricultural economics, class II(ii), 1964
Frank Keith, B.A., with Honours in general studies, class II(ii), 1961
Geoffrey Robin, B.A., with Honours in English, class II(ii), 1964
Malcolm, B.A., with Honours in geography, class II(ii), 1962
Margaret, B.A., with Honours in history, class II(ii), 1964
Michael Edwin, M.B., Ch.B., 1960
Michael John, B.A., with Honours in sociology, class II(i), 1963
Neville Leslie, B.Sc., with Honours in chemistry, class II(ii), 1962
Peter Lancelot, B.A., with Honours in geography, class II(ii), 1964
Peter Lewis, B.Sc., with Honours in chemistry, class II(ii), 1964
Raymond, B.Sc., with Honours in chemistry, class II(i), 1959; Ph.D. (*in absentia*), 1962
Richard, B.Sc., with Honours in biochemistry, class III, 1962
Richard Francis, LL.B., with Honours, class II(i), 1961
Richard George, B.A., with Honours in history, class II(i), 1960; Ph.D., 1964
Robert Alan, B.A., in special studies (economics), 1961
Rodney Dransfield, B.Sc., with Honours in civil engineering, class I, 1959; M.Sc., 1963
William, B.Sc., with Honours in chemical engineering, class I, 1962
Wilton, John, B.Sc., 1964
Wiltse, Joseph August John Paul Milton, B.A., with Honours in philosophy and English literature, class II(ii), 1964
Wimpenny, Geoffrey Richard, B.A., with Honours in history, class II(ii), 1963
Winchcombe, Peter John, B.Sc., with Honours in civil engineering, class II(ii), 1962
Windley, Peter Francis, Ph.D., 1960
Winfield, Alan Hugh, B.Sc., 1961
Winn, Albert Kenneth, B.Sc., with Honours in physics, class II(ii), 1964
David, B.Sc., with Honours in electrical engineering, class II(ii), 1963
Richard Geoffrey, B.A., with Honours in sociology, class II(i), 1964
Winstanley, Christine, B.A., with Honours in French, class III, 1962
Winterburn, Conrad Vero, LL.B., with Honours, class II(i), 1963
Wise, Sheila Fay, B.A., with Honours in history, class II(ii), 1964
Wiseall, Barrie, B.Sc., with Honours in general studies, class I, 1961
Wiseman, Donald, LL.B., with Honours, class III, 1964
Witts, Noel Vaughan, B.A., with Honours in English, class II(i), 1963
Wombwell, Philip Roy, B.Sc., with Honours in chemistry, class III, 1961
Wong, Syd Moy, M.B., Ch.B., 1961
Wood, Alison Mary Wainman, B.A., with Honours in English, class II(i), 1961
Brian, B.Sc., with Honours in mechanical engineering, class I, 1956; Ph.D., 1961
Charles Peter, B.Sc., with Honours in geology, class II(i), 1963
Christopher David Malcolm, B.Sc., with Honours in mechanical engineering, class II(i), 1961

Wood, David Norris, Ph.D., 1961
Derick, B.Sc., with Honours in mathematics, class II(ii), 1963
Eileen, B.A., with Honours in Russian, class III, 1961
Frederick Alan, B.Sc., in general studies, 1956; M.Sc., 1963
Geoffrey Peter, B.A., with Honours in history, class II(i), 1961
George Dennis, B.Sc., with Honours in colour chemistry, class II, 1958; M.Sc. (*in absentia*), 1963
Gerard Edward, B.Sc., with Honours in mining, class II(i), 1961
Isabel Sandra Wainman, B.A., with Honours in Latin, class II(i), 1963
Jessie, B.A., in general studies, 1961
John Charles Murray, B.Sc., 1963
John Martin, B.Sc., with Honours in bacteriology, class II(i), 1961
John Matthew, B.Sc., with Honours in general studies, class II(ii), 1962
John Neville, B.Ch.D., 1961
John William, B.Ch.D., 1962
Kenneth Fowler, M.B., Ch.B., with Honours, class II, 1946; Ch.M., 1961
Margery, B.Sc., with Honours in zoology, class II(ii), 1962
Mrs. Katherine, M.A. (*in absentia*), 1962
Monica, B.Sc., with Honours in general studies, class II(ii), 1963
Randolf William, B.Sc., 1961
Raymond Stanley, LL.B., with Honours, class III, 1962
Woodall, Dorothy Maisie, B.A., in combined studies (geography and history), 1964
Woodhouse, John Russell, B.Ch.D., 1962
Valerie May, B.Sc., 1963
Woodman, Grace Mary, B.A., in general studies, 1961
Woodroffe, Daniel Michael, B.Sc., with Honours in electrical engineering, class II(ii), 1961
Patrick James, B.A., with Honours in modern languages, class II(ii), 1964
Woodrow, Joseph Charles, M.B., Ch.B., 1948; M.D., 1961
Woods, Hubert Frank, B.Sc., with Honours in biochemistry, class II(i), 1962
Marion, B.A., with Honours in general studies, class III, 1961
Robert Charles, B.Sc., in special studies (physics), 1961
Woodward, Mark Nicholas, LL.B., with Honours, class III, 1961
Maureen Ann, B.Sc., with Honours in general studies, class II(ii), 1961
Roland, B.A., with Honours in general studies, class III, 1961
Woodwark, Elizabeth Mary, B.Sc., with Honours in mathematics, class II(i), 1963
Woolcock, Alan, B.Sc., with Honours in metallurgy, class II(ii), 1963
Richard John, B.Sc., with Honours in chemical engineering, class I, 1963
Woolley, David, B.Sc., with Honours in biochemistry, class II(ii), 1958; Ph.D., 1961
Elizabeth Ann, LL.B., with Honours, class II(ii), 1961
Woolmer, Kenneth John, B.A., with Honours in economics, class I, 1961
Woolnough, James David, B.Sc., 1962
Linda Jean, B.A., with Honours in German, class II(ii), 1964
Woolridge, James Joseph, B.A., with Honours in mathematics and philosophy, class III, 1962
Wooton, John Martin Gower, B.A., with Honours in geography, class II(ii), 1961
Workman, David Richard, B.Sc., with Honours in geology, class II(i), 1958; Ph.D., 1961
Worsfold, Philip, B.Sc., with Honours in civil engineering, class III, 1961
Worthington, Elizabeth Elaine, B.A., with Honours in French, class II(i), 1962
Heather Anne, B.A., with Honours in sociology, class II(ii), 1964
Worthy, John, B.A., with Honours in English, class II(ii), 1961
Worton, Joan, B.A., with Honours in geography, class II(ii), 1961
Wragge, Margaret Hargreaves, B.A., in special studies (sociology), 1962
Wray, Dennis, B.Sc., with Honours in chemistry, class II(i), 1958; Ph.D., 1963
Frederick John, B.Sc., with Honours in agricultural chemistry, class III, 1961
Pamela Joan, B.Sc., with Honours in anatomy, class I, 1961
Wrenn, Michael Stanley, B.Sc., with Honours in physics, class II(i), 1962
Wright, Christopher Lewis, B.Sc., with Honours in chemistry, class II(i), 1964
Daphne Jennifer, B.A., with Honours in Spanish, class III, 1962

Wright, David Edmund, B.Sc., with Honours in mining, class III, 1961
Donald Owen, B.A., with Honours in German, class II(i), 1961
Frank Simeon, B.Sc., 1963; with Honours in mechanical engineering, class II(ii), 1964
Ian Walton, B.A., with Honours in history, class II(ii), 1964
Janet, B.A., with Honours in geography, class II(ii), 1961
John Kenneth, B.Sc., with Honours in geology, class II(i), 1962
John Williamson, B.Sc., with Honours in general studies, class III, 1961
Keith Anthony, B.Sc., with Honours in bacteriology, class II(i), 1962
Kenneth, B.Sc., in general studies, 1961
Michael David, B.Sc., 1961
Patrick, B.A., with Honours in Latin, class III, 1963
Trevor Harold, B.Sc., with Honours in electrical engineering class II(ii), 1963
Valerie Margaret, B.A., with Honours in general studies, class II(ii), 1962
Wroe, Christopher Hadfield, B.Sc., with Honours in physics, class III, 1962
Evelyn Elizabeth, B.A., with Honours in general studies, class II(ii), 1962
Wynne, Peter Joseph, LL.B., with Honours, class II(ii), 1962
Sarah Bruce, B.A., with Honours in sociology, class II(ii), 1963
Wyvill, Richard Anthony, B.A., with Honours in history, class II(i), 1964

Yalcin, Mahmut, B.Sc., 1962
Yaneske, Paul Philip, B.Sc., with Honours in general studies, class I, 1964
Yapp, Robin Edward, B.Ch.D., 1963
Yardley, Christopher Barry, B.Sc., 1961
Yarlott, Ralph, B.A., with Honours in history, class I, 1960; M.A., 1963
Yarwood, Robert Edwin, B.Sc., with Honours in chemistry, class III, 1964
Yashpon, Paul Robert, B.Ch.D., 1963
Yates, Charles Geoffrey, B.Sc., with Honours in colour chemistry, class III, 1958; M.Sc., 1961
George Christopher Martin, B.A., with Honours in English and history, class II(ii), 1963
Yazdi, Mansoor Ali Akbar, B.Sc., 1964
Yeadon, Alan, B.Sc., with Honours in chemistry, class II(ii), 1957; M.Sc., 1964
George Rodney Cant, B.Sc., with Honours in civil engineering, class II(i), 1962
Yeo, Robert Cher-Kern, M.Sc. (*in absentia*), 1962
Yeoh, Saw Kin, LL.B., with Honours, class III, 1964
Yeomans, Marjorie, M.B., Ch.B., 1960
Yerkess, Jack, B.Sc., with Honours in chemistry, class II(ii), 1964
Youle, Peter Frank, B.Sc., in general studies (*in absentia*), 1961
Young, Anthony Peter, B.Sc., 1964
Brian Robert, B.A., with Honours in general studies, class II(ii), 1962
John Howard, B.A., with Honours in Spanish, class I, 1964
John Wesley, B.A., with Honours in theology, class III, 1961
Philip John, B.Sc. (agricultural studies), 1961
Robert John Lovell, B.Sc., 1963
Younie, Marie Emily, B.Sc., with Honours in geography, class III, 1963

Zaman, Sheikh Hadiuz, B.Sc., 1963
Zarembski, Paul Michael, M.Sc., 1964
Ziegler, Marie-Claire Helene, LL.B., with Honours, class II(i), 1962
Zinnemann, Kurt Solly, M.Sc., with distinction, 1955; D.Sc., 1964
Zubair, Umrana, Ph.D. (*in absentia*), 1963
Zucker, Ulrich Fritz, B.Sc., with Honours in chemistry, class II(i), 1962
Zwiewka, Halina Maria, B.A., with Honours in sociology, class II(ii), 1964

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