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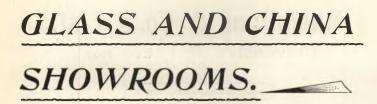
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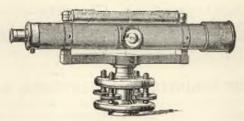
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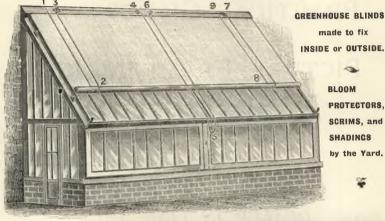
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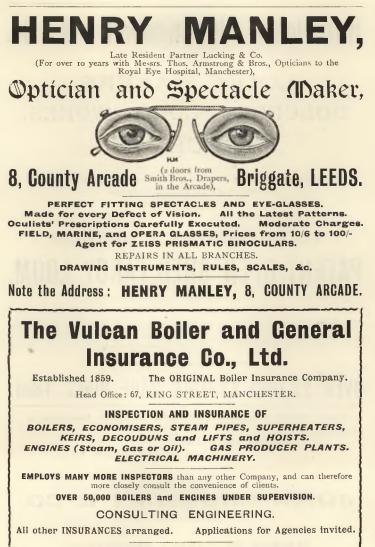
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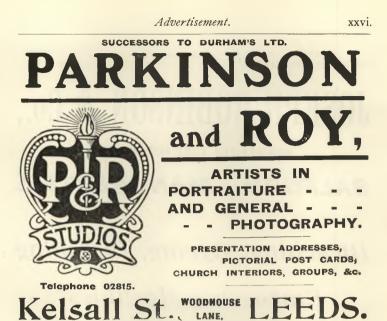
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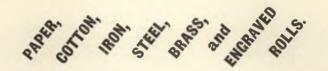
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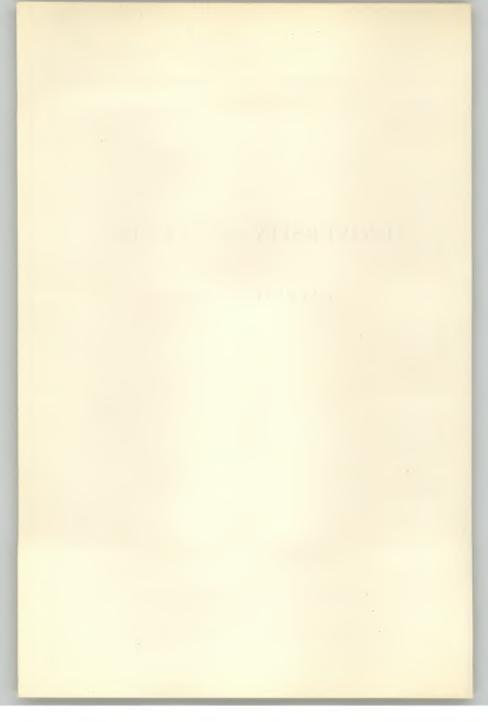
#### THE

# UNIVERSITY OF LEEDS

## CALENDAR, 1906-7

LEEDS: Jowett & Sowry, Printers & Lithographers

1906



## TABLE OF CONTENTS

				Page.
Almanac				4
Charter of Incorporation .				17
Statutes				30
University of Leeds Act 1904				44
Ordinances				50
Members of the Court, Council	, Senate	, Facu	lties,	
Boards of Faculties, etc.				86
Professors, Lecturers, etc.				106
Academic Terms, Admission	of Stu	dents,	and	
other general information				115
Matriculation Examination				129
Degrees, Examinations, and	Depart	mental		
Syllabuses :—				
Arts				134
Commerce .				184
Law				192
Science and Technolo	gy			202
Medicine .				288
Evening Classes				332
Extension Lectures .				341
Fellowships, Scholarships and E	xhibitic	ns		346
Graduates, Honours Lists, Exan	nination	Lists,	etc.	374
Registered Students, 1905-6		۰.		394
Societies, Clubs, etc.				404
Scholarship Examination Papers	, 1906			410
Index of Contents .				422

		ALMANAC, 1906-7.
		OCTOBER, 1906.
I 2	M Tu	First Term begins. Admission of students.
34	W Th	Admission of students. Entrance examinations at 2 p.m. Evening Class session begins.
5	F	Opening of Hall and Library and School of Medicine, Yorkshire College, by Duke and Duchess of York, 1894.
6	S	1094.
7 8 9 10 11 12 13	S M Tu W Th F S	D.P.H. examination begins. Meeting of Finance Committee.
14 15 16 17 18 19 20	S M Tu W Th F S	Winter course in Agriculture begins. Meeting of Board of Faculty of Arts. Meeting of Council. Meeting of Board of Faculty of Medicine.
21 22 23 24 25	S M Tu W Th	Meeting of Board of Faculties of Science and
26 27	F S	Technology.
28 29 30 31	S M Tu W	

NOVEMBER, 1906.		
1 2 3	Th F S	Admission of Yorkshire College to Victoria University, 1887.
4 5 6 7 8 9 10	S M Tu W Th F S	Meeting of Senate.
11 12 13 14 15 16 17	S M Tu W Th F S	Meeting of Finance Committee. Meeting of Board of Faculty of Medicine.
18 19 20 21 22 23 24	S M Tu W Th F S	Meeting of Board of Faculty of Arts. Meeting of Council.
25 26 27 28 29 30	S M Tu W Th F	Last day of entry for Final M.B. examination. Meeting of Board of Faculties of Science and Technology.

	DECEMBER, 1906.		
I	s		
2 3 4 5 6 7 8	S M Tu W Th F S	Meeting of Senate.	
9 10 11 12 13 14 15	S M Tu W Th F S	Final M.B. examination, Part II, begins. Meeting of Finance Committee. Terminal Examinations in Faculties of Arts, Science and Technology begin.	
16 17 18 19 20 21 22	S M Tu W Th F S	Meeting of Board of Faculty of Arts. First Term in Faculties of Arts, Science and Technology ends. Meeting of Council. Meeting of Board of Faculty of Medicine. First Term in School of Medicine ends.	
23 24 25 26 27 28 29	S M Tu W Th F S	Library closed until January 1. Christmas Day.	
30 31	S M		

A CONTRACTOR OF A CONTRACTOR O	JANUARY, 1907.		
1 2 3 4 5	Tu W Th F S	Library re-opened.	
6 7 8 9	S M Tu W	Second Term in School of Medicine begins. Second Term in Faculties of Arts, Science and Tech- nology begins.	
10 11 12	Th F S	Meeting of Finance Committee.	
13 14 15 16 17 18 19	S M Tu W Th F S	Meeting of Board of Faculty of Arts. Meeting of Council. Meeting of Board of Faculty of Medicine.	
20 21 22 23 24 25 26	S M Tu W Th F S		
27 28 29 30 31	S M Tu W Th	Meeting of Board of Faculties of Science and Technology.	

	FEBRUARY, 1907.	
I 2	FS	•
3 4 5 6 7 8 9	S M Tu W Th F S	Meeting of Senate.
10 11 12 13 14 15 16	S M Tu W Th F S	Meeting of Finance Committee. Meeting of Board of Faculty of Medicine.
17 18 19 20 21 22 23	S M Tu W Th F S	Meeting of Board of Faculty of Arts. Meeting of Council.
24 25 26 27 28	S M Tu W Th	Meeting of Board of Faculties of Science and Technology. Last day of application for the 1851 Exhibition Scholar- ship.

	MARCH, 1907.		
I	F	Last day of entry for M.A., M.Sc., Second and Final M.B., and D.P.H. examinations, and of application for Litt.D. and D.Sc.	
2	S	for Lift. D. and D.Sc.	
3 4	S M	Last day of entry for City and Guilds Institute exam- inations.	
5 6 7 8 9	Tu W Th F S	Meeting of Senate.	
10 11 12 13 14 15	S M Tu W Th F S	<ul> <li>D.P.H. Examination begins.</li> <li>Meeting of Finance Committee.</li> <li>Second and Final (Part I) M.B. examinations begin.</li> <li>Terminal Examinations in Faculties of Arts, Science and Technology begin. Meeting of Board of Faculty of Medicine.</li> </ul>	
17 18 19 20 21 22 23	S M Tu W Th F S	Meeting of Board of Faculty of Arts. Meeting of Council.	
24 25 26 27	S M Tu W	Second Term ends. Last day of application for Renewal of Scholarships.	
28 29 30	Th F S	GOOD FRIDAY. University closed. University closed.	
31	s	Easter Day.	

	APRIL, 1907.		
I 2 3 4 5 6	M Tu W Th F S	University closed. University closed. Last day of entry for Clothworkers' Evening Scholarships.	
7 8 9 10 11 12 13	S M Tu W Th F S	Meeting of Finance Committee.	
14 15 16 17 18 19 20	S M Tu W Th F S	Summer course in Agriculture begins. Meeting of Council. Victoria University Charter granted 1880. City and Guilds Institute Examinations begin.	
21 22 23 24 25	S M Tu W Th	<ul> <li>Third Term in School of Medicine begins.</li> <li>Third Term in Faculties of Arts, Science, and Technology begins.</li> <li>Examination for Clothworkers' Evening Scholarships.</li> <li>The Charter of the University received Royal Assent, 1904. Meeting of Board of Faculties of Science and Technology.</li> </ul>	
26 27 28	F S S	and Technology. Evening Class session ends.	
29 30	M Tu		

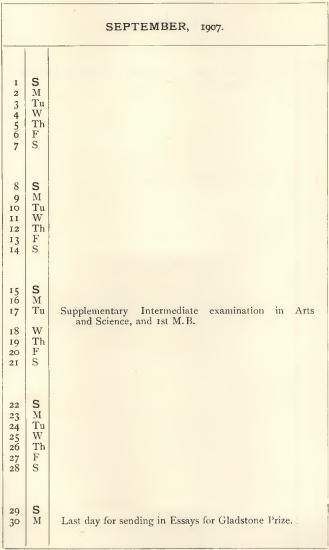
	MAY, 1907.		
I	w	Last day of entry for the June Degree Examinations and for the Entrance, Leighton, Salt, and Clothworkers' Day Scholarships.	
2 3 4	Th F S	Meeting of Senate.	
5 6 7 8 9 10 11	S M Tu W Th F S	Meeting of Finance Committee.	
12 13 14 15 16 17 18	S M Tu W Th F S	Examination for Craven and Clothworkers' Day Scholar- ships begins. Meeting of Council. Meeting of Board of Faculty of Medicine.	
19 20 21 22 23 24 25	S M Tu W Th F S	WHIT-SUNDAY. University closed. University closed.	
26 27 28 29 30	S M Tu W Th	Meeting of Board of Faculties of Science and	
31	F	Technology.	

	JUNE, 1907.		
I	S	Last day of entry for the Ch.M. Examination, for the July Matriculation Examination, and for the Infirmary	
2 3 4 5 6 7 8	S M Tu W Th F S	Scholarship. Meeting of Senate.	
9 10 11 12 13 14 15	S M Tu W Th F S	Degree Examinations in Faculties of Arts, Science and Technology begin. First M.B. Examination begins. Meeting of Finance Committee.	
16 17 18 19 20 21 21 22	S M Tu W Th F S	Last day of entry for Second and Final M.B. Examin- ations. Meeting of Board of Faculty of Arts. Meeting of Council. Meeting of Board of Faculty of Medicine.	
23 24 25 26 27 28 29	S M Tu W Th F S	University of Leeds Act received Royal Assent, 1904. Third Term in Faculties of Arts, Science and Tech- nology ends. Degree Day.	
30	S		

I 2

	JULY, 1907.		
1 2 3 4 56	M Tu W Th F S	Second and Final M.B. examinations begin.	
7 9 10 11 12 13	S M Tu W Th F S	Meeting of Finance Committee. Third Term in School of Medicine ends.	
14 15 16 17 18 19 20	S M Tu W Th F S	Opening of the Yorkshire College Buildings by the Prince and Princess of Wales, 1885. Meeting of Council.	
21 22 23 24 25 26 27	S M Tu W Th F S		
28 29 30 31	S M Tu W		
	Rodu .		

	AUGUST, 1907.		
1 2 3	Th F S	Library closed until August 19. Last day of application for Teachers' Assisted Studentships.	
4 5 6 7 8 9 10	S M Tu W Th F S	BANK HOLIDAY. University closed.	
11 12 13 14 15 16 17	S M Tu W Th F S	Leeds University Act received Royal Assent, 1904.	
18 19 20 21 22 23 24	S M Tu W Th F S	Library re-opened.	
25 26 27 28 29 30 31	S M Tu W Th F S	Last day of entry for the Baines Evening Scholarships, the Supplementary Intermediate examination in Arts and Science, and 1st M.B. Last day of entry for the September Matriculation Examination about this date.	



	OCTOBER, 1907.		
1 2 3 4 5	Tu W Th F S	First Term begins. Admission of Students. Entrance examinations at 2 p.m.	
6 7 8 9 10 11 12	S M Tu W Th F S	D.P.H. examination begins.	
13 14 15 16 17 18 19	S M Tu W Th F S		
20 21 22 23 24 25 26	S M Tu W Th F S		
27 28 29 30 31	<b>S</b> M Tu W Th		

# 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 by and in such name to sue and be sued and to do all other lawful acts whatsoever 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 :

I. 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 of 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 such part 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 examinations, 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.

### Visitor

IV. 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.

#### Authorities of the University

V. 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.

### The Chancellor

VI. 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, Marquis 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.

#### The Pro-Chancellor

VII. 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.

### The Vice-Chancellor

VIII. 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.

### The Pro-Vice-Chancellor

IX. 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.

# The Court

X. 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 :

(a) The titles of Degrees,

(b) The establishment of new Degrees,

(c) The periods of residence and study in the University or in any affiliated or recognised institution required for Degrees,

(d) The conditions under which Degrees higher than the Degree of Bachelor in any faculty are to be granted,

(e) 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.

# The Council

XII. 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.

# The Senate

XIII. 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.

### Faculties

XIV. 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.

### Convocation

XV. 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.

### Powers of Convocation

XVI. 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.

### Regulations as to Procedure

XVII. 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.

## The Treasurer

XVIII. 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.

# Members of the University

XIX. 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.

### Advisory Committees

XX. 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.

## Examiners and Examinations

XXI. 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.

### General Provisions

XXII. 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

### I.

# The University Court

# (a)

The University Court (hereinafter called the Court) shall consist of the following persons, viz. :

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 future members of the University Council, during their tenure of office; all present Perpetual and Life Governors of the College; and all future Donors of  $\pounds_{1,000}$  to the University. If a donation of  $\pounds_{1,000}$  be made by a company, society, or partnership firm, one member thereof may be nominated by the Donors as a member of the Court.

- 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.
- 3. Representatives of Public Authorities, viz.:
  - 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 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, viz :—one representative for every hundred members up to 500.

5. Representatives of other Institutions, viz. :

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.

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.

Ten 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.

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 all future donors of  $\pounds_{1,000}$  to the University, and the persons nominated by the donors in the case of donations of  $\pounds_{1,000}$  made by a company, society, or partnership firm, shall hold office for their respective lives, or until resignation.

All other members mentioned in clause (a) 2 above, and all members mentioned in clause (a) 3 above, shall hold office for one year from the date of appointment. Members mentioned in clause (a) 4 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. Members mentioned in clause (a) 5 and 6, shall hold office for two years from the respective dates of appointment. Members mentioned in clause (a) 7 shall hold office for five years from the

<sup>(</sup>b)

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, 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.
- Two representatives of the Clothworkers' Company of London.
- Five representatives to be elected by the Faculties of the University.

One member 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. 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), shall not exceed one fifth of the whole Council.

( $\delta$ ) 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 and the Treasurer shall hold office for the time during which they occupy the positions named respectively.

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.

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 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 and the Professors of the University, and of such other members of the Boards of Faculties hereinafter mentioned as the Court may, after report from the Senate, appoint, provided that the number of such other members appointed shall not exceed three, and that they shall hold office for such term only as the Court shall determine.

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 subdivision 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.

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

Each of the Faculties shall have the power of electing a representative or representatives on the Court and Council of the University, but in the event of the number of Faculties being so increased that the members of the staff elected by them would exceed the proportion limited as hereinbefore expressed, the Council shall decide by what Faculties or combinations of Faculties the election shall be made.

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.

The Faculty of Arts shall, until otherwise provided by Statute, include Economics and Law.

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

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.

#### Χ.

# 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 Additional made by any of the Universities in Manchester, Liverpool and adopted by Leeds to proposed Statutes and Ordinances of the University the Court on May 19, 1905, of Sheffield shall consist of twelve members, three to be and allowed appointed by each of the said Universities.

Statute by His Majesty

Such Committee shall be convened by the Registrar of the in Council July 11, 1905. Victoria University of Manchester.

4 I

#### Statutes

#### XII.

### Regulation and conduct of the Matriculation examination

The conditions and subjects of the Matriculation examination, which constitutes the entrance to the Degree courses of the University, together with the exemptions and variations from it, shall be regulated by a Joint Board as constituted in the following clauses of this section.

The Joint Board shall consist of eighteen members, five to be annually elected by each of the Universities in Manchester, Liverpool, and Leeds, and, unless by agreement between all the four Universities it shall be otherwise determined, three by the University in Sheffield, with power to co-opt persons of educational experience to the number of three.

When any change in the regulations regarding the Matriculation examination 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 be referred to each of the four Universities, which shall each then nominate two additional members on the Board for the purpose. The decision of the Board so constituted shall be final.

The Board shall send annual reports to each University.

The regulations of the Board regarding the Matriculation examination shall not affect the power of each University to admit students to such classes and courses as it may think fit.

The four Universities shall contribute to the expenses of the Joint Board in such proportions as may be hereafter determined.

Provided that this Statute shall continue and be in force for seven years from the date of its approval by His Majesty in Council.

### 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 Matriculation examination.

As amended by the Court, May 19, 1905 and allowed by His Majesty in Council, July 11, 1905.

### Statutes

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 First day of 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.

# AN ACT

# To merge the Yorkshire College in the University of Leeds and to transfer all the property and liabilities of the Yorkshire College to the University of Leeds and for other purposes.

### (Royal Assent, 24th June 1904.)

Preamble WHEREAS the Yorkshire College was in the year one thousand eight hundred and seventy-eight constituted and incorporated under the Companies Acts 1862 and 1867 as an Association not for profit with the object of founding endowing and maintaining in the county of York a College or Colleges and by means thereof and otherwise of promoting the education of persons of both sexes and in particular of providing instruction in such sciences and arts as are applicable or ancillary to the manufacturing mining engineering and agricultural industries of the county of York and in ancient and modern languages history and literature medicine surgery law logic moral philosophy and other branches of education and with such other subordinate objects as are in the Memorandum of Association of the said College mentioned :

> And whereas by Royal Charter dated the twentieth day of April one thousand eight hundred and eighty the Victoria University was constituted and founded having its seat in the city of Manchester with power to confer degrees and other distinctions except in medicine or surgery unless and until authority in that behalf should be given by further Charter or by Act of Parliament which authority was given by a supplemental Charter dated the twentieth day of March one thousand eight hundred and eighty-three:

> And whereas in the year one thousand eight hundred and eighty-seven the Yorkshire College was admitted as a College in the Victoria University :

> And whereas by Royal Charter dated the fifteenth day of July one thousand nine hundred and three it is provided that the Victoria University shall henceforth be called and known as the Victoria University of Manchester and (among

other things) that on the grant of a Charter establishing a university having its seat in Leeds or elsewhere in Yorkshire the Yorkshire College shall cease to be a College of the Victoria University of Manchester:

And whereas on the Petition of the Yorkshire College a Charter was on the twenty-fifth day of April one thousand nine hundred and four granted by His Majesty constituting in the city of Leeds a university by the name and style of the University of Leeds with faculties of Arts Science Medicine and Technology and such other faculties as may from time to time be constituted by the statutes of the University and with power to grant degrees and to do all acts and things which may be requisite in order to further the objects of the University as a teaching and examining body and to cultivate and promote art science and learning :

And whereas the Yorkshire College has consequently ceased to be a College in the Victoria University of Manchester and the governing body of the Yorkshire College are desirous and it is expedient that the College should be merged in the University of Leeds and that all its property and liabilities should be transferred to and vested in the lastnamed University :

And whereas it is expedient to empower the University of Leeds to hold examinations under Section 3 of the Medical Act 1886 and to elect a representative on the General Council mentioned in Section 7 of the same Act:

And whereas the objects of this Act cannot be attained without the authority of Parliament:

MAY IT THEREFORE PLEASE YOUR MAJESTY

That it may be enacted and be it enacted by the King's Most Excellent Majesty by and with the advice and consent of the Lords Spiritual and Temporal and Commons in this present Parliament assembled and by the authority of the same as follows (that is to say) :

This Act may be cited as the "University of Leeds Short title. τ. Act. 1904."

2. On the passing of this Act the Yorkshire College Dissolution shall be by virtue of this Act dissolved and cease to exist and of Yorkshire all property real and personal of every description (including transfer to property to things in action) and all rights and privileges of the York-University of shire College which immediately before that date belonged Leeds.

to or were vested in that College shall be by virtue of this Act without any conveyance or other instrument transferred to and vested in the University of Leeds for all the estate and interest therein of the Yorkshire College and shall be applied to the objects and purposes for which the University of Leeds is incorporated.

Transfer of liabilities.

Saving for agreements deeds actions &c.

Adjustment of property and liabilities &c. 3. On the passing of this Act all debts and liabilities of the Yorkshire College shall by virtue of this Act be transferred and attached to the University of Leeds and shall thereafter be discharged and satisfied by that University.

4. All agreements awards contracts deeds and other instruments and all actions and proceedings and causes of action or proceedings which immediately before the passing of this Act were existing or pending in favour of or against the Yorkshire College shall continue and may be carried into effect enforced and prosecuted by or in favour of or against the University of Leeds to the same extent and in like manner as if the University of Leeds instead of the Yorkshire College had been party to or interested in the same respectively.

5. (1) The Council of the Victoria University of Manchester the Council of the Owens College Manchester and the Council of the University of Liverpool or any of them may by agreement with the Council of the University of Leeds adjust and settle all questions arising with respect to any endowments property powers privileges authorities debts liabilities obligations or expenses in which the parties to the agreement are interested and also with respect to any examinations degrees and other University and College matters.

(2) An agreement under this section may provide for the transfer retention division apportionment or commutation of any endowments property debts liabilities or obligations and for a payment being made by any party to the other or others in respect of any such transfer retention division apportionment or commutation or in respect of the salary or remuneration of any officer or person and generally may make as between the parties to the agreement any provisions necessary or proper for carrying into effect the purposes of this Act.

(3) In default of agreement on any such question as aforesaid or so far as such agreement does not extend the question shall be referred to a single arbitrator to be nominated by the Lord President of His Majesty's Council on the application of any party and his award may provide for any matter for which an agreement might have provided. And subject as aforesaid the provisions of the Arbitration Act 1889 shall apply.

6. All professors and other members of and persons Saving for attached to or associated with the teaching staff of the Yorkshire College and all salaried or paid officers and Yorkshire servants of the Yorkshire College shall hold as nearly as College. practicable the same offices and places in the University of Leeds as they held in the said College immediately before the passing of this Act and upon the same terms and conditions unless and until the Council of the University shall otherwise decide.

7. Any power or right of the Yorkshire College or of the Transfer of Council Senate or other members of that College as such to nominate appoint or nominate a member of the governing body of any members of certain educational charitable or other institution shall on the passing governing of this Act be transferred to and may be exercised by the Council of the University of Leeds.

8. The University of Leeds is hereby empowered to hold Power of University of qualifying examinations in medicine surgery and midwifery Leeds to hold for the purpose of registration under the Medical Acts as if examinations under the Medical Acts as if under 49 and the University had been a University in the United Kingdom 50 Vict. c. 48. legally qualified at the passing of the Medical Act 1886 to grant diplomas in medicine and surgery and the provisions of Part I of that Act shall be read and have effect accordingly.

9. The Council of the University of Leeds shall be Power of University of entitled to choose one representative to be a member of the Leeds to General Council constituted by the Medical Acts and choose representative Section 7 of the Medical Act 1886 shall be read and have on General Medical effect as if the University of Leeds had been expressly Council. included therein.

10. Section 7 of the Mortmain and Charitable Uses Application of Act 1888 shall be read and have effect as if the words "and Mortmain &c. the University of Leeds" were therein inserted after the Act 1888 (st and 52 Vict, words "Victoria University."

bodies.

Section 7 of C. 42).

Construction of bequests in favour of Yorkshire College.

As to the Charitable

Copy of Act to he

registered.

11. Any will deed or other document whether made or executed before or after the passing of this Act which contains any bequest gift or trust in favour of the Yorkshire College shall on and after the passing of this Act be read and have effect as if the University of Leeds were therein named instead of the Yorkshire College.

12. The Charitable Trusts Acts 1853 to 1894 shall not extend to the University of Leeds or to any college or hall Trusts Acts. therein.

> 13. The Council of the University of Leeds shall deliver to the Registrar of Joint Stock Companies a printed copy of this Act and he shall retain and register the same and if such copy is not so delivered within three months from the passing of this Act the University of Leeds shall incur a penalty not exceeding two pounds for every day after the expiration of those three months during which the default continues and any member of the said Council who knowingly and wilfully authorises such default shall incur the like penalty. Every penalty under this section shall be recoverable summarily.

> There shall be paid to the Registrar by the University of Leeds on such copy being registered the like fee as is for the time being payable under the Companies Act 1862 on registration of any document other than a Memorandum of Association.

> 14. The costs charges and expenses of and incidental to preparing and obtaining this Act shall be defrayed by the University of Leeds out of income or of the capital of the property by this Act transferred to the University or if the Council of the University think fit out of money to be raised by sale or mortgage of some part of the said property.

# An Act to extend the privileges of the Graduates of the University of Leeds.

## (Royal Assent, 15th August, 1904.)

RE it enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows :----

Costs of Act.

### Leeds University Act. 1004

1. Wherever any office is or shall be open to graduates of Extenthe Universities of Oxford, Cambridge, and London, and of privithe Victoria University of Manchester, or wherever any leges of grad. privilege or exemption has been or shall be given by any Act uates of of Parliament or regulation of any public authority to Univergraduates of the Universities of Oxford, Cambridge, and sity. London, and the Victoria University of Manchester, graduates of the University of Leeds having the degree which would be a qualification if it had been granted by the University of Oxford, Cambridge, or London, or the Victoria University of Manchester, may become candidates for and may hold any such office and shall be entitled to all such privileges as fully as graduates of any of the last-mentioned universities.

2. This Act may be cited as the Leeds University Act, Short 1904.

Leeds

### ORDINANCES

#### made by the Court in accordance with the provisions of Clauses X and XI of the Charter

### I. AFFILIATED COLLEGES AND INSTITUTIONS

(Ordained, May 18, 1904; amended, March 2, 1906.)

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 two years at least the courses of study which have been recognised for such degree.

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. (May 18, 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 B.A. Ordinary or Honours degree.

THE TECHNICAL COLLEGE, HUDDERSFIELD. (March 2, 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 degrees of B.A., B.Sc. (including Engineering), and M.B. and Ch.B.

### II. DEGREES IN ARTS

(Ordained, July 3, 1905; amended, May 30, 1906.)

1. The degrees in Arts shall be :

Bachelor of Arts (B.A.) Master of Arts (M.A.) Doctor of Letters (Litt.D.).

# Degree of Bachelor of Arts

2. The degree of Bachelor of Arts shall be conferred either as an Ordinary degree or as a degree with Honours.

3. All candidates for the degree of Bachelor of Arts shall be required to have passed the Matriculation examination, and thereafter to have pursued approved courses of study for not less than three academic years.

# Ordinary Degree of Bachelor of Arts

4. The complete course of study for the Ordinary degree of Bachelor of Arts shall be divided into two parts, called respectively the Intermediate course and the Final course.

5. Every candidate shall be required to pass two examinations, the Intermediate and the Final.

6. The Intermediate and Final examinations shall ordinarily be held in June of each year. There shall also be a supplementary Intermediate 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 an Intermediate 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 committees, on report from the separate Examination committee concerned, may determine.

8. Candidates who have failed at a Final examination may present at the June examination of the following year those books and periods in which they have already been examined.

9. All candidates shall be required, before presenting themselves for the Intermediate or Final examination, to furnish to the Registrar certificates testifying that they have regularly attended the prescribed courses of study, and performed the class exercises to the satisfaction of the Professor or Lecturer, in each of the subjects which they offer at the examination.

### Intermediate Course and Examination

10. Every candidate shall be required, after passing the Matriculation examination, to attend during one academic year approved courses of study in five subjects, and to pass in each of the subjects selected, viz.:

- i, ii. Two languages from the following list: Greek, Latin, French, German, one of which must be Greek or Latin.
  - iii. Either (a) English Literature ; or (b) History (Ancient or Modern).

- iv. Either (a) Logic; or (b) Mathematics; or (c) one of the following Natural Sciences: Physics, Chemistry, Geology.
- English Language or any subject under i, ii, iii, iv not already selected, provided that no candidate may take (a) both Ancient and Modern History, (b) two Natural Sciences.

The examination in each modern language shall include an oral examination.

#### Final Course and Examination

11. Every candidate shall be required to attend approved courses of study in three principal subjects and one subsidiary subject, and to pass in each of the subjects selected. The same subject may not be taken both as a principal and as a subsidiary subject. An essay paper shall be set for all candidates at the Final examination.

12. The course of study in each principal subject shall extend over two academic years, and the course of study in the subsidiary subject shall extend over one academic year.

13. The principal subjects shall be selected from the following list: Greek, Latin, French, German, English Language and Literature, History, Philosophy, Economics, Education, Pure and Applied Mathematics. Every candidate shall be required to take as a principal subject one of the following: Greek, Latin, French, German. The examination in each modern language shall include an oral examination.

14. The subsidiary subjects shall be selected from the following list: English Literature, History, Philosophy, Economics, Education, Pure Mathematics, Applied Mathematics. The course of study in a subsidiary subject may be taken either in the first or second year of the Final course.

15. Candidates who have attended, during the first year of their Final course, the prescribed course of study in a subsidiary subject, may present themselves in June of that year for examination in such subsidiary subject. Part of the examination in Education, to be defined by Regulation, may also be taken at the end of the first year of the Final course.

# Degree of Bachelor of Arts with Honours

1. Candidates for the degree of Bachelor of Arts with Honours shall, except as hereinafter stated, be required to furnish certificates of having attended courses of instruction approved by the University and extending over not less than three academical years in one of the Honours Schools of the University hereafter enumerated.

2. Every candidate for the degree of Bachelor of Arts with Honours shall be required to present himself for examination at 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. This examination shall ordinarily be held in June of each year.

3. Candidates for the degree of Bachelor of Arts with Honours may present themselves for examination in any of the following Honours Schools on furnishing certificates of having pursued, to the satisfaction of the Senate, the courses required for such Honours Schools in the University, viz. :

Classics

English Language and Literature

Modern Languages and Literatures

History

Philosophy

Economic and Political Science.

4. Candidates who have passed the Final examination for an Ordinary degree of Bachelor of Arts may, with the sanction of the Senate and on furnishing certificates of having attended, during the academic year following such Final examination for the Ordinary degree, the third year's, or, during the two academic years following such Final examination, the second and third years' courses approved by the University for any one of its Honours Schools, present themselves for examination for the degree of Bachelor of Arts with Honours in such School.

5. No candidate for a degree of Bachelor of Arts with Honours shall be admitted more than once to examination in the same Honours School; but students who have passed

the Final examination in any of the Honours Schools may be admitted to the Final examination in any other Honours School after the expiration of one or two years, on presenting certificates of having attended, during the period in question, courses approved by the University.

Provided that in the said other Honours School selected, candidates shall not present themselves for the Final examination more than two academic years after the Final examination in Honours already passed by them, and also that no candidate be admitted to examination in any Honours School after a longer period than five years has elapsed since the date of his first entrance upon a prescribed course of study for an Honours School.

6. Names of candidates who have passed the examination for the degree of Bachelor of Arts with Honours shall be published in such form as to distinguish the Honours School in which severally they may have passed; the names of those who have passed in Honours being drawn up in three classes, and each class being arranged in alphabetical order.

7. Candidates who have not acquitted themselves so as to deserve Honours may be excused the whole or such part of the examinations for the Ordinary degree as the joint Examination committee may determine.

### Degree of Master of Arts

Ι

1. The degree of Master of Arts may be conferred, on payment of the proper fee, upon registered Bachelors of Arts when of not less than three years' standing from the date of their graduation as Bachelors, subject to the conditions contained in the following paragraphs.

2. Bachelors of Arts who have graduated with Honours may proceed to the degree of Master of Arts on presenting a dissertation satisfactory to the Senate on a subject approved by the Board of the Faculty of Arts.

3. Bachelors of Arts who have obtained the Ordinary degree shall be required to pass an examination in a subject or group of subjects upon which instruction is given in the Faculty of Arts, and to present a dissertation satisfactory to the Senate on a subject approved by the Board of the

Faculty of Arts, or, if they do not present a dissertation, to pass a more extended examination. Regulations shall determine the subjects and groups of subjects in which the examination will be held. Certificates of attendance on courses of study in the University shall not be required.

4. The names of candidates who have passed the examination for the degree of Master of Arts shall be arranged in alphabetical order without distinction of classes.

Π

Graduates or persons who have passed the Final examination for a degree of other approved Universities shall, if they present evidence satisfactory to the Senate 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 M.A., without taking the B.A. degree, after not less than two years of such advanced study or research. Such candidates shall be required to give evidence to the Senate at the end of the first year of their period of study that their work has been satisfactory, and at the end of their second year they shall be required to present a dissertation, and to satisfy such further test, if any, as the Senate shall deem expedient.

### Degree of Doctor of Letters

Registered Masters of Arts 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, shall be entitled to be admitted to the degree of Doctor of Letters at the expiration of not less than six years from the date of admission to the Bachelor's degree.

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 examination as it may from time to time determine.

#### III. DEGREE IN COMMERCE

(Ordained, July 3, 1905.) 1. The degree in Commerce shall be that of Bachelor of Commerce (B. Com.).

2. All candidates for the degree of Bachelor of Commerce shall be required to have passed the Matriculation examination, with at least one modern foreign language as one of the subjects, and thereafter to have pursued approved courses of study for not less than three academic years.

3. The complete course of study for the degree of Bachelor of Commerce shall be divided into two parts, called respectively the Intermediate course and the Final course.

4. Every candidate shall be required to pass two examinations, the Intermediate and the Final.

5. The Intermediate and Final examinations shall ordinarily be held in June of each year. There shall also be a supplementary Intermediate examination in September, at which those candidates only may present themselves who have obtained the permission of the Senate.

6. Candidates who have failed at an Intermediate 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 committees, on report from the Examination committee for the degree of Bachelor of Commerce, may determine.

7. All students shall be required, before presenting themselves for the Intermediate or Final examination, to furnish to the Registrar certificates testifying that they have regularly attended the prescribed courses of study, and performed the class exercises to the satisfaction of the Professor or Lecturer, in each of the subjects which they offer at the examination.

#### Intermediate Course and Examination

8. Every candidate shall be required, after passing the Matriculation examination, to attend during not less than one academic year approved courses of study in five subjects, viz. :

i. Economics: the outlines of the economic history of England in the Nineteenth Century, and the general elementary principles of Economics

ii. The economic geography of the British Empire

iii. A modern foreign language (French or German)

iv, v. *Two* of the following :

A second modern foreign language (French or German, whichever of the two has not been offered under iii)

Mathematics

European History from 1763,

and to pass in each of the subjects offered. The examination in each modern foreign language shall include an oral examination.

#### Final Course and Examination

9. Every candidate shall be required, except as provided in clause 10, to attend approved courses of study, extending over two years, and to pass an examination in each of the following principal subjects :

- i. Economics : comprising (a) advanced general Economics (b) a special economic subject
- ii. A modern foreign language (French or German)
- iii. A second modern foreign language (French or German, whichever of the two has not been offered under ii)

iv. Accountancy.

The examination in each modern foreign language shall include an oral examination. An essay shall also form part of the examination.

10. For the second modern foreign language *or* for Accountancy candidates may substitute *two* of the following, studied each for one year as a subsidiary subject:

- (a) The economic geography of the principal foreign countries
- (b) Commercial Law
- (c) Accountancy (unless Accountancy has already been offered as a principal subject).

Candidates may take the course of study in a subsidiary subject in the first year of the Final course, and present themselves at the end of that year for examination in such subject.

### IV. DEGREES IN LAW

(Ordained, March 2, 1906.)

1. The degrees in Law shall be :

Bachelor of Laws (LL.B.) Doctor of Laws (LL.D.).

### Degree of Bachelor of Laws

2. All candidates for the degree of Bachelor of Laws shall be required to have passed the Matriculation examination, except those who may be exempted therefrom, and thereafter to have pursued approved courses of study for not less than three academic years.

3. The complete course of study for the degree of Bachelor of Laws shall be divided into two parts, called respectively the Intermediate course and the Final course.

4. Every candidate shall be required to pass two examinations, the Intermediate and the Final.

5. The Intermediate and Final examinations shall ordinarily be held in June of each year.

6. All candidates shall be required, before presenting themselves for the Intermediate or Final examination, to furnish to the Registrar certificates testifying that they have regularly attended the prescribed courses of study in each of the subjects which they offer at the examination.

#### Intermediate Course and Examination

7. Every candidate shall be required, after passing the Matriculation examination, or after obtaining exemption therefrom, to attend during one academic year approved courses of study, and to pass in each of the following subjects :

- i. Roman Law
- ii. Elements of English Law
- iii. The Law and Custom of the English Constitution
- iv. Any subject included in the course for the Intermediate examination for the Ordinary degree of B.A. or B.Com.

Provided that candidates who are already graduates of this or any other University within the United Kingdom shall not be required to attend classes or to be examined in iv.

#### Final Course and Examination

8. Every candidate shall be required to attend during two academic years one or other of the following courses of study, and to pass in each of the subjects of the selected course :

### Course I.

- i. Roman Law
- ii. Jurisprudence
- iii. Public or Private International Law.

An essay paper shall be set at the Final examination for all candidates taking this course.

### Course II.

- i. Property, Real and Personal (including Conveyancing)
- ii. Equity (including Company Law)
- iii. Common Law (including Criminal Law and Bankruptcy)
- iv. Evidence and Procedure
- v. Jurisprudence.

#### V. DEGREES IN SCIENCE

(Ordained, July 3, 1905; amended, May 30, 1906.)

1. The degrees in Science shall be :---

Bachelor of Science (B.Sc.) Master of Science (M.Sc.) Doctor of Science (D.Sc.).

## Degree of Bachelor of Science

2. The degree of Bachelor of Science shall be conferred either as an Ordinary degree or as a degree with Honours.

3. All candidates for the degree of Bachelor of Science shall be required to have passed the Matriculation examination, and thereafter to have pursued approved courses of study for not less than three academic years.

## Ordinary Degree of Bachelor of Science

4. The complete course of study for the Ordinary degree of Bachelor of Science shall be divided into two parts, called respectively the Intermediate course and the Final course.

5. Every candidate shall be required to pass two examinations, the Intermediate and the Final.

60

6. The Intermediate and Final examinations shall ordinarily be held in June of each year. There shall also be a supplementary Intermediate 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 an Intermediate 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 committees, on report from the Examination committee concerned, may determine.

8. All candidates shall be required, before presenting themselves for the Intermediate or Final examination, to furnish to the Registrar certificates testifying that they have regularly attended the prescribed courses of study, and performed the class exercises to the satisfaction of the Professor or Lecturer, in each of the subjects which they offer at the examination.

9. The proficiency of candidates in laboratory work may be determined by inspection of their laboratory note books and the consideration of terminal or sessional reports from their laboratory teachers. Candidates may also be called upon to undergo a special practical examination at the Intermediate and Final stages of the degree course.

It shall always be in the power of the External Examiner to impose a practical or *vivå voce* examination on such occasions as he may think desirable.

#### Intermediate Course and Examination

10. Every candidate shall be required, after passing the Matriculation examination, to attend during not less than one academic year approved courses of study in three subjects (one of which must be Mathematics or Physics) selected from the following:

Mathematics Physics Chemistry Biology Geology,

and to pass in each of the subjects selected.

Candidates who propose to take an Applied Science (see section 15) in the Final course must pass in the subjects of the Intermediate course specified in section 20.

11. Every candidate is further required, at some time during his course, to take an additional subject at the Intermediate standard, selected from the following: Greek, Latin, French, German, English Literature, English Language, Ancient or Modern History, Logic, Economics, Economic Geography, Mathematics, Physics, Chemistry, Biology, Geology. In the case of candidates taking an Applied Science as a principal subject in the Final course (section 20 below), this list is increased by the addition of Applied Mechanics and General Engineering.

12. A descriptive essay relative to the scientific or technical work of the candidates will be set as part of the Intermediate examination, and will be examined by the Examiners in English in co-operation with the Examiners in the scientific department concerned, and in the event of a student failing in this portion of the Intermediate examination, he shall be permitted to take it again at any subsequent Intermediate examination.

#### Final Course and Examination

13. Every candidate will be required to attend approved courses of study either in two principal subjects, or in one principal subject and two subsidiary subjects, provided that the same subject shall not be taken both as a principal and a subsidiary subject. One of the subjects selected must be Mathematics, Physics, Chemistry, or an Applied Science.

In the Final examination there will be included, for translation into English, passages of French and German, relating to the principal subject or subjects of a candidate's degree course, and credit will be given for correct renderings of such passages. In the case of candidates who have passed neither in French nor in German at the Matriculation examination, and who have passed neither in French nor in German as an additional subject at the Intermediate standard, it shall be obligatory to satisfy the Examiners in the translation of one of the aforesaid passages from either French or German.

14. The course of study in each principal subject shall extend over at least two years beyond the Intermediate

standard, and the course of study in a subsidiary subject shall extend over at least one year beyond the Intermediate standard.

### Principal Subjects

15. The principal subjects shall be selected from the following lists:

Pure Sciences:

Mathematics Physics Chemistry Zoology Botany Physiology Geology.

Applied Sciences:

Mechanical Engineering

Civil Engineering

Electrical Engineering

Mining Engineering

Agriculture

Applied Chemistry (Colour Chemistry and Dyeing)

Applied Chemistry (Chemistry of Leather Manufacture).

Every candidate taking Physics as a principal subject is required to have passed in Mechanics at the Matriculation examination, or to satisfy the Professor of Physics that he possesses an adequate knowledge of the subject.

In the event of Physiology being chosen as a principal subject, the second principal or the two subsidiary subjects shall be chosen from among the following: Physics, Chemistry, Zoology, Botany. In any case, six months' instruction in Human Anatomy will be required.

Every candidate taking an Applied Science as a principal subject is required to pursue one of the courses specified in section 20.

### Subsidiary Subjects

16. The subsidiary subjects shall be selected from the following list:

Mathematics I (Pure) Mathematics II (Pure and Applied) Physics Chemistry Zoology Botany Physiology Geology Human Anatomy Bacteriology

Education (including the teaching of Elementary Science).

Mathematics I and II cannot be taken together as subsidiary subjects.

17. The following subjects shall rank as subsidiary subjects in connection with courses where Mechanical or Civil or Electrical or Mining Engineering is taken as a principal subject:

Mechanical Engineering Civil Engineering Electrical Engineering Mining Engineering.

18. The course of study in the subsidiary subjects may be taken either in the first or second year of the Final course.

19. Candidates who have attended, during the first year of their Final course, the prescribed course of study in a subsidiary subject, may present themselves in the following June for examination in such subsidiary subject. When Education is taken as a subsidiary subject, part of the examination may be taken at the end of each of the two years of the Final course. Candidates who fail to satisfy the examiners in such parts of the Final examination as they have taken at the end of the first year of their Final course shall be required to repeat this part of the examination at a subsequent June examination.

### Courses for candidates taking an Applied Science

20. Candidates selecting an Applied Science as a principal subject are required to attend courses of study and to present themselves for examination in definite subjects, as specified below :

### Mechanical Engineering :

- Intermediate—Mathematics, Physics, and Chemistry; additional subject at Intermediate standard, Applied Mechanics.
- Final—Principal subject, Mechanical Engineering; subsidiary subjects, Mathematics, and either Physics or Civil or Electrical or Mining Engineering, but in any case the candidate shall produce a certificate of having satisfactorily attended a prescribed course in Physics.

### Civil Engineering :

- Intermediate—Mathematics, Physics and Chemistry; additional subject at Intermediate standard, Applied Mechanics.
- Final—Principal subject, Civil Engineering; subsidiary subjects, Mathematics, and either Geology or Mechanical or Electrical or Mining Engineering, but in any case the candidate shall produce a certificate of having satisfactorily attended a prescribed course in Geology.

Electrical Engineering :

- Intermediate—Mathematics, Physics, and Chemistry; additional subject at Intermediate standard, Applied Mechanics.
- Final—Principal subject, Electrical Engineering; subsidiary subjects, Mathematics, and either Physics or Mechanical or Civil or Mining Engineering, but in any case the candidate shall produce a certificate of having satisfactorily attended a prescribed course in Physics.

### Mining Engineering:

Intermediate—Mathematics, Physics, and Chemistry; additional subject at Intermediate standard, Applied Mechanics.

Final—Principal subject, Mining Engineering; subsidiary subjects, two of the following: Mathematics, Geology, Mechanical, or Electrical Engineering, but candidates shall produce certificates of having satisfactorily attended prescribed courses of study in each of these four subjects.

Agriculture :

Intermediate—Physics, and two of the following: Chemistry, Biology, Geology; together with an additional subject at Intermediate standard (see section 11).

Final—Agriculture, as principal subject, together with one of the pure sciences specified under section 15 above as the second principal subject, or two of the pure sciences specified under section 16 as subsidiary subjects.

Applied Chemistry (Colour Chemistry and Dyeing):

Intermediate—Mathematics, Physics, and Chemistry; additional subject at Intermediate standard, General Engineering.

Final—Two principal subjects, viz: Colour Chemistry and Dyeing, and Chemistry.

Candidates presenting Applied Chemistry (Colour Chemistry and Dyeing) may not present this subject until the end of the fourth year of study. Such candidates may take the examination in Chemistry at the end of the third year.

Applied Chemistry (Chemistry of Leather Manufacture):

Intermediate—Three of the following: Mathematics, Physics, Chemistry, Biology, and an additional subject at Intermediate standard (see section 11).

Final—Two principal subjects, viz: Chemistry of Leather Manufacture, and Chemistry.

### Degree of Bachelor of Science with Honours

I. The degree of Bachelor of Science with Honours will be awarded in the following subjects:

Mathematics Physics Chemistry

Zoology Botany Physiology Geology Civil Engineering Mechanical Engineering Electrical Engineering Mining Engineering Applied Chemistry (Chemistry of Leather Manufacture) Applied Chemistry (Colour Chemistry and Dyeing)

### Agriculture

2. Candidates will be required to present certificates of attendance upon approved courses of study extending over three or four years, as defined under the regulations for each Honours School. Such certificates of attendance shall only be granted when the candidate has regularly attended to the work of the classes and has acquitted himself satisfactorily at the class examinations.

3. Candidates for Honours must present certificates that they have satisfied the Examiners in such subjects as would fulfil the requirements of the Intermediate examination (including the additional subject), but they will be excused the examination in any subject which they will subsequently present at a more advanced standard. They must also attend the recognised classes, and pass in one principal or two subsidiary subjects of the Final examination for the Ordinary degree, provided that such subjects shall not include the subject in which they are presenting themselves for Honours. It shall not be obligatory to pass simultaneously in the subjects thus prescribed, whether at the Intermediate or at the Ordinary Final standard.

4. A special examination in connection with each Honours School will be held at the end of the course of study, ordinarily in June of each year. Candidates who have prosecuted research may be excused part of this examination.<sup>1</sup>

### 67

<sup>1</sup> Further regulations relating to research work offered by candidates will be announced at a later date.

5. In the Final examination there will be included, for translation into English, passages of French and German relating to the subject in which the candidate is presenting himself for Honours. In the case of candidates who have passed neither in French nor in German at the Matriculation examination, and who have passed neither in French nor in German as an additional subject at the Intermediate standard, it shall be obligatory to satisfy the examiners in the translation of one of the aforesaid passages from either French or German.

6. Names of candidates who have passed the examination for the degree of Bachelor with Honours will be published in such form as to distinguish the Honours School in which severally they may have passed; the names of those who have passed in Honours being drawn up in three classes, and each class being arranged in alphabetical order.

7. Candidates who have not acquitted themselves so as to deserve Honours, but have reached the standard of the Ordinary degree, may be recommended for that degree.

8. Candidates who have passed the examination for the Ordinary degree of Bachelor of Science may (during the succeeding year or the two years immediately succeeding) proceed with the course of study in an Honours School.

9. No candidate for a degree of Bachelor of Science with Honours shall be admitted more than once to examination in the same Honours School, except under special conditions approved by the Senate; but the course shall in no case exceed four years, except in cases of illness, when a medical certificate satisfactory to the Senate will be required.

10. Students who have passed the Final examination in any of the Honours Schools shall be admitted to the Final examination in any other Honours School after the expiration of one or two years, on presenting certificates of having attended, during the period in question, courses approved by the University, provided that in the said other Honours School selected candidates shall not present themselves for the Final examination more than two academic years after the Final examination in Honours already passed by them, and also that no candidate be admitted to examination in any Honours School after a longer period than five years has elapsed since the date of his first entrance upon a prescribed course of study for an Honours School.

11. Candidates who have passed the Second M.B. examination may, with the sanction of the Senate, and on furnishing certificates of having during the academical year following such Second M.B. examination attended the third year's, or during the two academical years following such Second M.B. examination of having attended the second and third year's course approved by the University for one of its Honours Schools in Science, present themselves for examination for a B.Sc. degree with Honours in such school.

### Degree of Master of Science

#### I

1. The degree of Master of Science is conferred, on payment of the proper fee, upon registered Bachelors of Science, when of three years' standing from the date of their graduation as Bachelors, subject to the conditions contained in the following paragraphs.

2. Bachelors of Science who have graduated with Honours are not required to present themselves for any further examination for the degree of Master of Science.

3. Bachelors of Science who have obtained the Ordinary degree are required to satisfy the Examiners in a further examination in *one* of the following subjects: Mathematics, Physics, Chemistry, Zoology, Botany, Physiology, Geology, Mechanical, Civil, Electrical, Mining Engineering, Applied Chemistry (Colour Chemistry and Dyeing), Applied Chemistry (Chemistry of Leather Manufacture), and Agriculture. Certificates of attendance are not required.

4. The names of candidates who have passed the further examination for the degree of Master of Science are arranged in alphabetical order without distinction of classes.

5. Candidates who have prosecuted research, and who give satisfactory evidence thereof by the presentation of a thesis, may be excused part of the examination.

#### II

Graduates or persons who have passed the Final examination for a degree of other approved Universities shall, if they present evidence satisfactory to the Senate 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 M.Sc., without taking the B.Sc. degree, after not less than two years of such advanced study or research. Such candidates shall be required to give evidence to the Senate at the end of the first year of their period of study that their work has been satisfactory, and at the end of their second year they shall be required to present a dissertation, and to satisfy such further test, if any, as the Senate shall deem expedient.

### Degree of Doctor of Science

1. The degree of Doctor of Science is conferred by the University upon registered Masters of Science 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 the Faculties, also require candidates to pass such an examination as it may from time to time determine.

2. A Master of Science of the University may make application for the degree of Doctor of Science in the sixth or any subsequent year from the date of his admission to the Bachelor's degree.

3. 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 memoir, whether in type or in manuscript, which the applicant may desire to submit in support of the application.

4. If the application be approved by the Senate, the degree may be conferred at the expiration of not less than six years from the date of admission to the Bachelor's degree.

VI. DEGREES IN MEDICINE AND SURGERY

(Ordained, July 3, 1905; amended, May 30, 1906).

The degrees in Medicine and Surgery shall be :

Bachelor of Medicine and Bachelor of Surgery

(M.B. and Ch. B.)

Doctor of Medicine (M.D.)

Master of Surgery (Ch.M.).

### Ordinances ....

### Degrees of Bachelor of Medicine and Bachelor of Surgery

t. Candidates for the degree of Bachelor of Medicine and of 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 subsequently to the date of passing the First examination.

2. Candidates for the degrees of Bachelor of Medicine and of Surgery are required to satisfy the Examiners in the several subjects of the following examinations, entitled respectively:

The Matriculation examination, or such other examination as may have been recognised by the Joint Matriculation Board of the Universities of Manchester, Liverpool, Leeds and Sheffield in its stead; the First examination; the Second examination; the Final examination.

#### First Examination

3. The first Examination shall consist of two parts :

PART I. Physics

Chemistry.

PART II. Biology.

Candidates will be allowed to pass the two parts separately.

4. Candidates, before presenting themselves for the First examination, are required to furnish certificates of having attended courses of instruction in accordance with the Regulations of the University, and to have passed the Matriculation examination.

5. Candidates who have passed the Intermediate examination for the degree of Bachelor of Science in Chemistry, Physics, and Biology, will, on payment of the required additional fee, be regarded as having passed the First examination for the degrees of Bachelor of Medicine and Bachelor of Surgery.

6. The names of candidates who have satisfied the Examiners in either part of the First examination shall be published in alphabetical order.

#### Second Examination

7. The Second examination shall consist of two parts :

PART I. Anatomy Physiology.

## PART II. Materia Medica

Pharmacy.

Candidates will be allowed to pass the two parts separately.

8. Candidates, before presenting themselves for the Second examination, are required to furnish certificates of having attended courses of instruction in accordance with the Regulations of the University, and to have passed the First examination.

9. The names of candidates who have satisfied the Examiners in either part of the Second examination shall be published in alphabetical order.

#### Final Examination

- 10. The subjects of the Final examination are as follows:
  - i. Pharmacology and Therapeutics
  - ii. Pathology and Bacteriology
  - iii. Forensic Medicine and Toxicology and Public Health
  - iv. Obstetrics and Gynæcology
  - v. Surgery : Systematic, Clinical and Practical
  - vi. Medicine : Systematic and Clinical, including Mental Diseases and Diseases of Children.

Candidates may either present themselves in all the six subjects of examination on the same occasion, or may pass the examination in two parts, the first part consisting of two or three of the subjects i, ii, and iii; the second part consisting of the remaining subjects.

II. Candidates who fail to satisfy the Examiners in the first part must either present themselves again in the subjects as selected, or in all the three subjects of the first part, or in all the six subjects of examination.

12. Candidates, before presenting themselves for the first part or the second part of the Final examination, are required to have passed the Second examination, and to furnish certificates of having attended courses of instruction, in accordance with the Regulations of the University.

72

13. Candidates for the first part of the examination must have completed the eleventh term of medical study in accordance with the Regulations of the University.

Candidates for the second part of the examination, or for the whole examination, must have completed the fifth year of medical study in accordance with the Regulations of the University.

14. The names of candidates who have satisfied the Examiners in the first part of the Final examination shall be published in alphabetical order.

15. The names of candidates who have satisfied the Examiners in all the subjects of the Final examination, and are recommended for degrees, shall be published as follows :

- 1. Those awarded First Class Honours
- 2. Those awarded Second Class Honours
- 3. Those who have satisfied the Examiners.

The names shall be in alphabetical order in each case.

# Degree of Doctor of Medicine

1. No candidate shall be admitted to the degree of Doctor of Medicine unless he has previously received the degrees of Bachelor of Medicine and Bachelor of Surgery, and at least one year has elapsed since he passed the examination for those degrees.

2. Candidates for the degree of Doctor of Medicine are required to present a dissertation, and, if the dissertation be accepted, to pass an examination. The dissertation, of which the subject must previously have received the approval of the Board of the Faculty of Medicine, must embody the results of personal observations or original research, either in some department of medicine or of some science directly related to medicine, provided always that original work, published in scientific journals, or in the Proceedings of learned societies, or separately, shall be admissible in lieu of or in addition to a dissertation specially written for the degree. Candidates will be required to write a short extempore essay on some topic connected with medicine, and to answer questions on the history of medicine. They will also be examined orally on the dissertation or other work submitted. Any candidate

may be exempted from a part or the whole of the examination if the Board of the Faculty so decide. No candidate will be admitted to the degree unless his application, after report from the Board of the Faculty of Medicine, shall have been accepted by the Senate.

3. The names of candidates who have been approved for the degree of Doctor of Medicine shall be published in alphabetical order.

# Degree of Master of Surgery

1. No candidate shall be admitted to the degree of Master of Surgery unless he has previously received the degrees of Bachelor of Medicine and Bachelor of Surgery, and at least one year has elapsed since he passed the examination for those degrees.

2. Every candidate, before presenting himself for the examination for the degree of Master of Surgery, is required to have graduated as Bachelor of Medicine and Bachelor of Surgery, and to furnish certificates of attendance in accordance with the Regulations of the University.

3. Subjects of Examination :

Surgical Anatomy Surgery Operative Surgery Clinical Surgery Ophthalmology

Pathology and Bacteriology.

4. The names of candidates who have satisfied the Examiners shall be published in alphabetical order.

### VII. DEGREES IN DENTAL SURGERY

(Ordained, May 30, 1906)

r. The degrees in Dental Surgery shall be : Bachelor of Dental Surgery (B.Ch.D.) Master of Dental Surgery (M.Ch.D.)

### Degree of Bachelor of Dental Surgery

2. All candidates for the degree of Bachelor of Dental Surgery shall be required to have passed the Matriculation examination, to have pursued thereafter approved courses of

study for not less than five academic years, two of such years at least having been passed in the University subsequently to the date of passing Parts I and II of the First examination, and to have completed such period of pupilage or hospital attendance, or both, as may be prescribed by the Regulations of the University. No candidate shall be admitted to the degree who has not attained the age of twenty-one years on the day of graduation.

3. All candidates shall be required to have passed the following examinations: the First examination, the Second examination, the Final examination.

4. Each examination shall include practical work in the subjects offered.

5. All candidates shall be required, before presenting themselves for examination, to furnish to the Registrar certificates testifying that they have attended the prescribed courses of instruction in accordance with the regulations of the University in each of the subjects which they offer, and that they have fulfilled the other requirements of the Ordinance and Regulations in respect of such examination

#### First Examination

6. The first examination shall consist of three parts :

Part I. Physics Chemistry Part II. Biology Part III. Dental Mechanics

Dental Metallurgy.

7. Candidates shall be allowed to pass in each part separately.

8. Candidates who have passed the Intermediate examination for the degree of Bachelor of Science, and have in that examination satisfied the Examiners in Chemistry, in Physics, or in Biology, shall, on payment of the difference between the fees required for the two examinations, be regarded as having satisfied the requirements of Parts I and II of the First examination for the degree of Bachelor of Dental Surgery, in those subjects in which they have passed.

9. Candidates shall be required, before presenting themselves for Parts I and II of this examination, to have passed the Matriculation examination, and to have attended courses of instruction in accordance with the Regulations of the University.

to. Candidates shall be required, before presenting themselves for Part III of this examination, to have completed two years from Matriculation, and to have attended courses of instruction in accordance with the Regulations of the University.

#### Second Examination

11. The subjects of the Second examination shall be:

Anatomy

Physiology

Dental Anatomy and Physiology

Dental Materia Medica.

12. Candidates shall be required, before presenting themselves for the Second examination, to have passed the First examination not less than one year previously, and to have attended courses of instruction in accordance with the Regulations of the University.

#### Final Examination

13. The subjects of the Final examination shall be :

Dental Surgery

Dental Pathology and Bacteriology

**Operative Dental Surgery** 

Medicine and Surgery.

14. Candidates shall be required, before presenting themselves for the Final examination, to have passed the First examination not less than two years previously, to have passed the Second examination not less than six months previously, and to have attended courses of instruction in accordance with the Regulations of the University.

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

(Ordained, March 8, 1905)

(a) 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 January 1, 1905, as equivalent to corresponding courses and examinations in the University of Leeds.

(b) 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.

(c) A student of the Yorkshire College, who before December 31, 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

#### (Ordained, March 8, 1905)

(a) 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 examination for such degree.

(b) 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.

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

(Resolved, March 8, 1905; ordained, March 2, 1906)

1. As to 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 :

- (a) 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.
- (b) Graduates in Medicine of other Universities shall be admissible on application to the M.B. degree of the University of Leeds.
- (c) Applications from non-medical graduates of other Universities who have been students of the Yorkshire College shall be considered on their merits.
- (d) 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 :
- (a) 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.

- (b) Graduates of other Universities shall be offered the degree of Bachelor in this University in the Faculties in which they graduated elsewhere.
- (c) The question of the admission to degrees of Associates *honoris causa* shall be deferred.
- (d) The following Associates by examination and otherwise shall be admissible to the several degrees set against their names respectively, viz.: Herbert Ingle, to the degree of B.Sc.; Charles Arthur Watson to the degree of B.A.; Alfred Parkin to the degree of M.B.; Edgar Johnson Allen, Arthur Edward Potter, Herman Emil Schmitz, William Wright Marriner, Herbert Hutchinson, George Robert Thompson, Julian Stanton Wise, Harry Medforth Dawson, Antonius Joseph Manasseh, Reuben Shacksnovis, Henry Archbold Smith, to the degree of B.Sc.
- (e) 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

(Ordained, March 2, 1906)

I. 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.

(Resolved, May 18, 1904; ordained, March 2, 1906)

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.

(Resolved, March 8, 1905; ordained, March 2, 1906)

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

(Resolved, May 18, 1904; amended and ordained, March 2, 1906)

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

- 1. Five members of the Joint Matriculation Board of the Universities of Manchester, Liverpool, Leeds, and Sheffield.
- 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

### (Ordained, March 8, 1905; amended, March 2, 1906)

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

### (Resolved, May 18, 1904; ordained, March 2, 1906)

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

### (Ordained, March S, 1905)

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

(Ordained, March 8, 1905)

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

(Ordained, March 8, 1905)

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

(Ordained, March 8, 1905)

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

### (Ordained, March 8, 1905)

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

#### (Ordained, March 8, 1905)

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

(Ordained, March 8, 1905)

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

(Ordained, March 8, 1905)

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 reeligible at the end of each year.

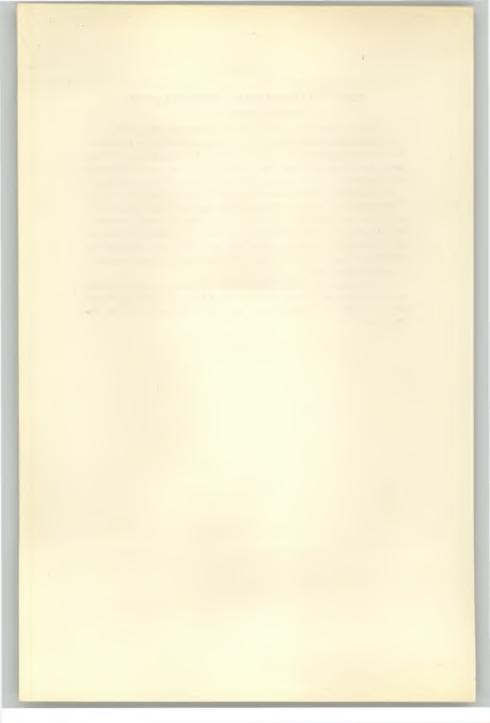
# XXV. REGISTER OF CONVOCATION

(Ordained, March 2, 1906)

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 of any further fee.

3. Bachelors of this University of three years' standing and Masters and Doctors shall be entitled to be registered as members of Convocation upon payment of a fee of 10s. 6d.



# THE UNIVERSITY OF LEEDS

# Visitor

His Majesty THE KING

# Chancellor

The Most Honourable THE MARQUIS OF RIPON, K.G., LL.D.

## Pro-Chancellor

ARTHUR GREENHOW LUPTON

### Vice-Chancellor

NATHAN BODINGTON, M.A., Litt.D., Late and Hon. Fellow of Lincoln College, Oxford

# Pro-Vice-Chancellor

Professor ARTHUR SMITHELLS, B.Sc., F.R.S.

### Treasurer

SIR FRANCIS SHARP POWELL, BART., M.A., LL.D., M.P.

# Registrar

WILLIAM F. HUSBAND, LL.B.

### THE COURT

# The CHANCELLOR The PRO-CHANCELLOR The VICE-CHANCELLOR The TREASURER

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Mrs. ASHTON, London

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MARSHALL STABLES	- ,,
Joseph Lowden	- ,,
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Dr. FRANCIS COLLINS	The Drapers' Company Wm. Akroyd's Foundation ∫West Yorkshire Coal
FREDERICK JAMES MUNBY	Owners' Association Vorkshire Board of Legal Studies

# **Representatives of Public Authorities**

Appointed by
<sup>1</sup> Alderman HENRY DUNN West Riding County Council
<sup>1</sup> Councillor JOHN JEREMY BRIGG,
M.A., LL.M
Councillor PHILIP HENRY BOOTH - ,, ,,
Alderman WILLIAM BRAITHWAITE -
Councillor Dr. THOMAS SCOTT - ,, ,,
Councillor HERBERT SMITH
Councillor EDWIN TALBOT ,, ,,
Councillor HENRY WESTWOOD
Col. JAMES DIGBY LEGARD - North Riding County Council
Councillor ROBERT ELLIOTT PANNETT ,, ,,
<sup>1</sup> The Right Hon. LORD HERRIES, \ Fast Riding County Council
LL.D.
The Right Hon. LORD WENLOCK, LL.D.
Alderman ROBERT STANLEY
Scholfield
<sup>1</sup> Councillor JOHN HENRY ARMITAGE Count Borough of Leeds
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Alderman JOHN BUCKLE-
Councillor WILLIAM HENRY CLARKE
Councillor Edward Audus Hirst -
Councillor FRED OGDEN ,, ,,
<sup>1</sup> Alderman WILLIAM EDWIN BRIGGS County Borough of Bradford
PRIESTLEY, M.P.
Councillor ROBERT ROBERTS
Councillor WM. ALFRED WHITEHEAD ,, ,, ,,
<sup>1</sup> Alderman WILLIAM MCKAY County Borough of York
Alderman ROBERT HORTON VERNON)
WRAGGE
Sir ALFRED GELDER County Borough of Hull
<sup>1</sup> Alderman ARTHUR ROLLIT ,, ,,
Alderman GEORGE HENRY SMITH - County Borough of Halifax
<sup>1</sup> Councillor Arthur Crabtree
Alderman JOHN ARTHUR BROOKE - County Borough of Hudders- field
Alderman JAMES EDWARD WILLANS ,, ,, ,,
Sir T. HUGH BELL, Bart County Borough of Middles-
brough

# Representatives of The University

Elected by

<sup>1</sup> Professor W. R. PHILLIPS, LL.M. Professor B. M. Connal, M.A. Professor J. H. Clapham, M.A. Faculty of Arts

1 Member of the Court by virtue of Membership of the Council.

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Appointment Eupines

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<b>B.</b> Courts of other Universities (Appointed by the Chancellor.)	
Liverpool, The VICE-CHANCELLOR Sheffield, ,,	Sept. 30, 1906 Jan. 1, 1907
C. The General Medical Council <sup>3</sup> Professor BARRS D. Education Committees	Oct. 19, 1907
West Riding - The PRO-CHANCELLOR North Riding - The VICE-CHANCELLOR East Riding - Professor MIALL ", ", " Professor WELTON Yorkshire Council for	March, 1907 March 8, 1907 May 7, 1907
Agricultural Education The Right Hon. A. H. D. ACI J. A. BROOKE The PRO-CHANCELLOR EDWIN WOODHOUSE	March, 1907
City of York - Professor CLAPHAM Borough of Doncaster J. A. CLAXTON, Headmaste the Doncaster Grammar Sc ,, Harrogate Dr. MOORMAN	
E East North and West Diding Laist East	mining Road

E. East, North, and West Riding Joint Examining Board The VICE-CHANCELLOR July 19, 1907

# F. Affiliated Institutions

College of the Resurrection, Mirfield Technical College,	Professor RHYS ROBERTS	Jan. 11, 1907
	The VICE-CHANCELLOR	Nov. 10, 1906
G. Schools, etc.		
Akroyd Foundation	∫ <sup>5</sup> JOHN RAWLINSON FORD <sup>5</sup> The VICE-CHANCELLOR	July 19, 1910
Almondbury Grammar School Barnsley Grammar School	ol - <sup>6</sup> C. L. Brook - <sup>5</sup> G. Blake Walker	,, Feb. 15, 1910 Nov. 18, 1908

The number prefixed to a name indicates the number of years in the term of the appointment.

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j	Nov. 18, 1908
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Bridlington Grammar School <sup>5</sup> C. G. WHEELHOUSE, LL. D	D
D.Sc., F.R.C.S.	July 16, 1907
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Castleford Secondary School - C. M. GILLESPIE	May 2, 1909
Coxwold Charity <sup>3</sup> H. M. DAWSON	July 19, 1908
Dewsbury — Endowed Schools Professor CLAPHAM	Dec. 20, 1910
Doncaster Grammar School - <sup>3</sup> C. B. COOKE YARBOROUGH	4 July 19, 1908
Drax Free School • JOHN TAYLOR	July 15, 1908
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School Professor SCHUDDEKOPF	
Hipperholme Grammar School - <sup>5</sup> W. H. AVKROVD	Feb. 18, 1908
Ilkley Grammar School - • Professor PROCTER	Nov. 18, 1908
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Knaresborough Grammar School <sup>3</sup> J. A. EDDISON	
Leeds Grammar School - <sup>5</sup> The VICE-CHANCELLOR	May 4, 1908
Leeds, Mount St. Mary's	
Secondary School - Miss H. ROBERTSON	June 20, 1909
Malton (Old) Grammar School - <sup>8</sup> HUGH W. PEARSON	June 15, 1907
Normanton Grammar School + <sup>6</sup> Professor SMITHELLS	June 18, 1908
Northallerton Grammar School - <sup>3</sup> WILLIAM BROWN	July 19, 1908
Pickering Grammar School <sup>3</sup> Rt. Hon. A. H. DYKE	Cast IN 1000
ACLAND Pontefract Grammar School - <sup>5</sup> Professor GRANT	Sept. 17, 1908 March 19, 1907
Rastrick Grammar School - <sup>3</sup> Professor ROBERTS	Dec. 20, 1909
Sedbergh Grammar School • <sup>5</sup> Professor VAUGHAN	Feb. 15, 1910
Skipton-Ermysted's Grammar	Nov. 18, 1908
Skipton Girls' Middle School - <sup>5</sup> Professor PHILLIPS	June 15, 1909
Slaithwaite Grammar School - <sup>3</sup> J. A. BROOKE, M.A.	June 15, 1907
Samahar in Halifar	
Bairstow's Endowed School $J^{3}J. A. BROOKE, M.A.$	Feb. 15, 1908
Tadcaster Oglethorpe's Endowed } 5 Professor Rogers	Nov. 18, 1908
School J	
Endowed Schools	Nov. 18, 1908
Wakefield Grammar School - <sup>6</sup> Professor MIALL	Sept. 18, 1906
York—St. Peter's School - <sup>5</sup> Rev. J. M. MARSHALL	Feb. 10, 1909

The number prefixed to a name indicates the number of years in the term of the appointment.

### 106

# PROFESSORS, LECTURERS, Etc.

# FACULTY OF ARTS

Dean of the Faculty

PROFESSOR PHILLIPS

Classics

. Professors: W. RHYS ROBERTS, M.A., Litt. D., late Fellow of King's College, Cambridge.

B. M. CONNAL, M.A., Corpus Christi College, Oxford.

Assistant Lecturer : L. H. G. GREENWOOD, B.A., Fellow of King's College, Cambridge.

English Language and Literature

Professor : CHARLES E. VAUGHAN, M.A., Balliol College, Oxford.

Assistant Professor: FREDERIC W. MOOR-MAN, B.A., London, Ph.D., Strassburg.

French Language and Romance Philology

French Literature

German Language

Professor: PAUL BARBIER fils, M.A., London, B-es-L., Paris.

Assistant Lecturer: THOMAS B. RUDMOSE-BROWN, M.A., Aberdeen, D. Litt., Grenoble.

Professors: P. H. M. Du GILLON, Officier d'Academie; PAUL BARBIER fils, M.A., London, B-es-L., Paris.

and Literature Professor: ALBERT W. SCHUDDEKOPF, Ph.D., Göttingen.

> Assistant Lecturer: CHARLES E. GOUGH, University of Basle.

History . Professor: ARTHUR J. GRANT, M.A., King's College, Cambridge.

> Assistant Lecturer: R. F. YOUNG, M.A., Trinity College, Oxford.

Philosophy Lecturer : C. M. GILLESPIE, M.A., Trinity College, Uxford.

Economics

Professor: J. H. CLAPHAM, M.A., late Fellow of King's College, Cambridge. Lecturer on Accountancy: W. H. SHAW, F.C.A.

Education Professor of Education and Master of Method: JAMES WELTON, M.A., Gonville and Caius College, Cambridge, Professors, Lecturers, etc.

Education

Law

- Mistress of Method : Miss HANNAH ROBERTSON, B.A., London.
  - Assistant Lecturer: W. P. WELPTON, B.Sc., London.
  - Assistant Mistress of Method: Miss E. L. MELVILLE, M.A., Victoria and Leeds.
  - Teacher of Music, Reading and Elocution: T. J. HOGGETT, Mus.B., Durham.
  - Professor : WALTER R. PHILLIPS, LL.M., Trinity Hall, Cambridge.
  - Lecturer : ARTHUR E. CHAPMAN, M.A., LL.D., Christ's College, Cambridge.
  - Lecturer in Law at Hull : WILLIAM H. OWEN, LL.B., London.

### FACULTY OF SCIENCE

### Dean of the Faculty

PROFESSOR SMITHELLS

. Professor: LEONARD J. ROGERS, M.A., Mus. B., Balliol College, Oxford.

> Assistant Lecturer: FREDERICK B. WATSON, B.A., Trinity College, Cambridge, M.A., M.Sc., Durham.

Cavendish Professor: WILLIAM STROUD, M.A., D.Sc., Balliol College, Oxford.

Assistant Lecturer and Demonstrator: A. O. ALLEN, B.A., B.Sc., London.

Assistant Demonstrators : S. A. SHORTER, B.Sc., Victoria and Leeds.

G. W. CARLTON, B.Sc., Leeds.

Professor : ARTHUR SMITHELLS, B.Sc., London and Victoria, F.R.S.

Lecturer in Physical Chemistry: HARRY M. DAWSON, B.Sc., London and Leeds, Ph.D., Giessen.

Assistant Lecturers and Demonstrators :

W. LOWSON, B.Sc., London and Leeds, F.I.C.

C. E. WHITELEY, M.Sc., Victoria and Leeds.

Demonstrator: W. H. PERKINS, B.Sc., Victoria.

Mathematics

Physics

Chemistry .

t07

Organic Chemistry

7 . Professor: JULIUS B. COHEN, B.Sc., Victoria, Ph.D., Munich.

Biology

Professor: L. C. MIALL, D.Sc., Leeds, F.R.S. Assistant Lecturer in Botany: WILLIAM

G. SMITH, B.Sc., St. Andrews, Ph.D., Munich.

Assistant Lecturer and Demonstrator in Zoology: T. H. TAYLOR, M.A., Royal University of Ireland.

Assistant Lecturer and Demonstrator in Botany : NORMAN WALKER.

Junior Demonstrator in Biology: E. E. UNWIN, M.Sc., Leeds, B.Sc., Victoria.

Assistant and Keeper of the Insect Collections : MISS SIMPSON.

Physiology . . Professor : DE BURGH BIRCH, M.D., C.M., Edinburgh, F.R.S.E.

> Demonstrator: R. VEITCH CLARK, M.A., B.Sc., M.B., Ch.B., Edinburgh.

. Professor: PERCY F. KENDALL, M.Sc., Leeds, F.G.S.

Assistant Lecturer and Demonstrator: A. R. DWERRYHOUSE, D.Sc., Leeds, M.Sc., Victoria, F.G.S.

# FACULTY OF TECHNOLOGY

Dean of the Faculty

Professor BEAUMONT

Civil and Mechanical

Engineering . Professor : JOHN GOODMAN, M.Sc., Leeds, M.Inst.C.E., M.I.Mech.E.

> Lecturer in Civil Engineering: JAMES GILCHRIST, B.Sc., Edinburgh.

Assistant Lecturer and Demonstrator: D. R. MACLACHLAN, B.Sc., Glasgow. Demonstrators: HENRY S. MYERS, M.I. Mech.E.

R. HOWARD DUNCAN, A.R.C.Sc. J. M. THOMSON.

Electrical

Engineering . Lecturer : G. D. A. PARR, M.Sc., Leeds, M.I.E.E., A.M.I.Mech.E.

108

Geology

Professors, Lecturers, etc.

Assistant Lecturer and Demonstrator : WALTER E. FRENCH.

Mining .

Professor : GEORGE R. THOMPSON, B.Sc., London and Leeds.

Assistant : HERBERT PERKIN.

**Textile Industries** 

Professor: ROBERTS BEAUMONT, M.Sc., Leeds, M.I.Mech.E.

Assistant Lecturer and Demonstrator : THOMAS HOLLIS.

Assistant : ALEXANDER YEWDALL.

Demonstrator in Pattern Analysis and Assistant Designer for Woollens and Worsted Fabrics : GEORGE WHOWELL.

Designer : W. LAW.

Museum Assistant and Assistant Designer for Figured Fabrics : MISS BENTON.

Art Teacher: WILFRID A. FARLEY.

Demonstrators: HAROLD PIERCE HOLLO-WAY, THOMAS ALFRED FOX.

Dyeing and Tinetorial Cherr

Tinctorial Chemistry Professor : ARTHUR G. GREEN, M.Sc., Leeds, F.I.C.

> Lecturer and Research Assistant: ARTHUR G. PERKIN, F.R.S., F.I.C.

> Assistant Lecturer and Demonstrator: A. B. STEVEN, B.Sc., London.

Museum Curator: MISS MARY MUSGRAVE.

Leather Industries

Professor of Applied Chemistry (Chemistry of Leather Manufacture): HENRY R. PROCTER, M.Sc., Leeds, F.I.C.

Assistant Lecturer and Demonstrator: FERDINAND KOPECKY.

Demonstrator : HAROLD BRUMWELL.

Laboratory Demonstrator: DOUGLAS McCANDLISH, B.Sc., Leeds.

Research Assistant : HUGH GARNER BENNETT, B.Sc., Leeds.

Fuel and Metallurgy

Metallurgy . Frofessor of Applied Chemistry (Fuel and Metallurgy) : WILLIAM ARTHUR BONE, D.Sc., Victoria, Ph.D., Heidelberg, F.R.S.

Agriculture .

Professor: ROBERT S. SETON, B.Sc., Edinburgh.

Lecturers in Agriculture: RICHARD W. HAYDON.

CHARLES F. ARCHIBALD. Assistant Lecturer and Demonstrator:

J. G. STEWART, M.A., B.Sc., Aberdeen.

Lecturer on Agricultural Chemistry: CHARLES CROWTHER, M.A., Corpus Christi College, Oxford, Ph.D., Leipzig.

Lecturer in Veterinary Science : II. G. BOWES, F.R.C.V.S.

Lecturer and Demonstrator on Poultry : FRED PARTON.

Science Tutor: A. G. RUSTON, B.A., B.Sc., London.

Instructors in Practical Horticulture : THOMAS REDINGTON, F.R.H.S. ALFRED GAUT, F.R.H.S.

Assistant : FRANK REDINGTON.

Instructress in Dairy Work: Miss ANNIE D. McKERROW.

Instructor in Farriery: W. JONES ANSTEY.

# FACULTY OF MEDICINE

Dean of the Faculty

Professor GRUNBAUM

Anatomy

Professor : T. WARDROP GRIFFITH, M.D., C.M., Aberdeen, M.R.C.P.

Demonstrator: J. KAY JAMIESON, M.B., C.M., Edinburgh.

Honorary Demonstrators: M. A. TEALE, M.A., Christ Church, Oxford, M.R.C.S., L.R.C.P.

I. F. DOBSON, M.B., M.S., London, F.R.C.S.

W. GOUGII, B.Sc., M.B., B.S., London, F.R.C.S.

Physiology and Histology

Histology Professor: DE BURGH BIRCH, M.D., C.M., Edinburgh, F.R.S.E.

> Demonstrator: R. VEITCH CLARK, M.A., B.Sc., M.B., Ch.B., Edinburgh.

Pathology and Bacteriology

- y Professor: ALBERT S. GRÜNBAUM, M.A., M.D., Gonville and Caius College, Cambridge, F.R.C.P., D.P.H.
  - Demonstrator in Pathology: S. G. SCOTT, M.A., B.M., B.Ch., Magdalen College, Oxford.
  - Demonstrator in Bacteriology: R. D. SMEDLEY, M.B., Pembroke College, Cambridge, D.P.H.

Honorary Demonstrator in Surgical Pathology: HAROLD COLLINSON, M.B., B.S., London, F.R.C.S.

Medicine

Professor: A. G. BARRS, M.D., Edinburgh, F.R.C.P.

Honorary Demonstrator: G. W. WATSON, M.D., London, M.R.C.P.

Professor: H. LITTLEWOOD, M.Sc., Leeds, F.R.C.S.

Honorary Demonstrator: J. F. DOBSON, M.B., M.S., London, F.R.C.S..

ery Lecturer: R. LAWFORD KNAGGS, M.A., M.D., M.C., Gonville and Caius College, Cambridge, F.R.C.S.

**Operative Surgery** Lecturer : WALTER THOMPSON, F.R.C.S.

Professor: C. J. WRIGHT, M.Sc., Leeds, M.R.C.S.

Honorary Demonstrator : E. O. CROFT, M.D., Durham, M.R.C.S., L.R.C.P.

Lecturer: J. B. HELLIER, M.D. London, M.R.C.S.

Therapeutics, Pharmacy and Materia Medica

Gynæcology .

Public Health

Professor of Therapeutics: E. F. TREVELYAN, M.D., B.Sc., London, F.R.C.P.

Demonstrator of Pharmacy and Matcria Medica : J. H. GOUGH, F.C.S.

Professor: J. SPOTTISWOODE CAMERON, B.Sc., M.D., C.M, Edinburgh.

Honorary Demonstrator :

Forensic Medicine Professor : H. J. CAMPBELL, M.D., London, F.R.C.P.

> Demonstrator of Practical Toxicology: F. W. EURICH, M.D., C.M., Edinburgh,

Surgery

**Obstetrics** 

Practical Surgery

III

Ophthalmology

and Otology Lecturer: H. SECKER WALKER, M.Sc., Leeds, F.R.C.S.

Mental Diseases . Lecturer : W. BEVAN-LEWIS, M.Sc., Leeds, L.R.C.P., M.R.C.S.

Vaccination .

. Instructor: A. T. BACON, L.R.C.P.E., M.R.C.S.

# Emeritus Professors

JOHN EDWIN EDDISON, M.D., late Professor of Medicine.

A. W. MAYO ROBSON, D.Sc., F.R.C.S., late Professor of Surgery.

### Clinical Lecturers

The following Members of the Honorary Staff of the Leeds General Infirmary :---

- Medicine Dr. A. G. BARRS, Dr. T. WARDROP GRIFFITH (Hon. Physicians), Dr. E. F. TREVELYAN (Hon. Physician with charge of Out-patients), Dr. W. H. M. TELLING (Hon. Assistant Physician).
- Surgery Mr. E. WARD, Mr. W. H. BROWN, Mr. H. LITTLEWOOD, Mr. R. LAWFORD KNAGGS (Hon. Surgeons), Mr. B. G. A. MOYNIHAN, Mr. W. THOMPSON (Hon. Assistant Surgeons).
- Gynæcology Dr. J. B. HELLIER (Hon. Obstetric Physician). Ophthalmology
  - and Otology Mr. II. SECKER WALKER, Mr. A. L. WHITEHEAD (Hon. Surgeons of the Eye and Ear Department), Mr. G. CONSTABLE HAYES (Hon. Assistant Surgeon of the Eye and Ear Department).

Infectious Diseases. Mr. A. E. PEARSON (Medical Superintendent Leeds City Fever and Small Pox Hospitals).

#### Lecturers in the School of Dentistry

Dental Surgery .	ARTHUR G. G. PLUMLEY, M.B., London,
	M.R.C.S., L.R.C.P., L.D.S.
Operative Dental	
Surgery .	THOMAS S. CARTER, L.D.S.
Dental Anatomy	
and Physiology	A. ALAN FORTY, L.D.S.
Dental Mechanics	CHARLES RIPPON, L.D.S.

II2

External Examiners

# External Examiners

- Greek: LEWIS RICHARD FARNELL, M.A., D.Litt., Fellow, Tutor, and Dean of Exeter College, Oxford.
- Latin: REV. THOMAS LESLIE PAPILLON, M.A., late Fellow, Tutor, and Dean of New College, Oxford.

English Literature and Language: GEORGE CAMPBELL MACAULAY, M.A., Lecturer in English, University of Cambridge.

French: LÉON KASTNER, M.A., Professor of French, University College of Wales, Aberystwyth.

German : KARL BREUL, M.A., Litt.D., Ph.D., Reader in Germanic, University of Cambridge.

History and Economics: HENRY WILLIAM CARLESS DAVIS, M.A., Fellow and Tutor of Balliol College, Oxford.

Philosophy: JOHN HENRY MUIRHEAD, M.A., LL.D., Professor of Philosophy, University of Birmingham.

- Education : SAMUEL SIGMUND FECHHEIMER FLETCHER, M.A., Ph.D., Lecturer on Education, University of Cambridge.
- Law: ALFRED FRANK TOPHAM, M.A., LL.M., Fellow of Queens' College, Cambridge.
- Mathematics : RALPH ALLEN SAMPSON, M.A., D.Sc., F.R.S., Professor of Mathematics, University of Durham.
- Physics: ARNOLD WILLIAM REINOLD, M.A., F.R.S., Professor of Physics, Royal Naval College, Greenwich.
- Chemistry: SIR WILLIAM RAMSAY, K.C.B., D.Sc., F.R.S., Professor of Chemistry, University College, London.
- Zoology: SIDNEV FREDERIC HARMER, Sc.D., F.R.S., Fellow of King's College, Cambridge.
- Botany: FRANCIS WALL OLIVER, D.Sc., F.R.S., Quain Professor of Botany, University College, London.
- Geology: CHARLES LAPWORTH, M.Sc., LL.D., F.R.S., Professor of Geology and Physiography, University of Birmingham.
- Engineering: THOMAS HUDSON BEARE, B.Sc., M.I.C.E., M.I.M.E., Regius Professor of Engineering, University of Edinburgh.
- *Electrical Engineering*: WILLIAM EDWARD AYRTON, F.R.S., Dean of Central Technical College, South Kensington.

Applied Chemistry (Chemistry of Leather Manufacture): J. T. WOOD.

- Medicine and Mental Diseases : GEORGE NEWTON PITT, M.A., M.D., F.R.C.P., Lecturer on Pathology, Guy's Hospital.
- Surgery: ALBERT CARLESS, M.B., M.S., F.R.C.S., Professor of Surgery, King's College, London.

Pathology : WILLIAM BULLOCH, M.D., Lecturer on Bacteriology and Pathology, London Hospital.

Midwifery and Gynacology: PETER HORROCKS, M.D., F.R.C.P., Lecturer on Obstetrics and Diseases of Women, Guy's Hospital.

Medical Jurisprudence: SIR THOMAS STEVENSON, M.D., F.R.C.P., Senior Scientific Analyst to the Home Office.

- Materia Medica : FRANCIS WARNER, M.D., F.R.C.P., F.R.C.S., Lecturer on Therapeutics and Materia Medica, London Hospital.
- Anatomy: GEORGE DANCER THANE, Professor of Anatomy, University College, London.
- Physiology: JOHN SYDNEY EDKINS, M.A., M.B., Lecturer on Chemical Physiology, St. Bartholomew's Hospital.
- Public Health: COLONEL J. LANE NOTTER, M.D., late Professor of Military Hygiene, Netley.

114

# THE

# UNIVERSITY OF LEEDS

# Session 1906-1907

# Faculties of Arts (including Commerce and Law), Science and Technology<sup>1</sup>

# UNIVERSITY TERMS

The University session, or academic year, is divided into three terms. The first term begins Monday, October 1, 1906, and ends Wednesday, December 19, 1906; the second term begins Wednesday, January 9, 1907, and ends Wednesday, March 27, 1907; the third term begins Tuesday, April 23, 1907, and ends Saturday, June 29, 1907.

# ADMISSION OF STUDENTS

The classes and laboratories are open to men and women on the same terms. Special arrangements are made for the convenience of women students.

No day students are admitted under the age of sixteen years.

Candidates for admission to the University who are under nineteen years of age, and who have been at a school or other educational institution within one year of their application for admission, are required to produce a certificate of good conduct from the head of such institution.

All students are required, prior to admission, to sign a declaration that they will observe the statutes, ordinances, and regulations of the University for the time being.

The Vice-Chancellor will admit students on Monday, October 1, and Tuesday, October 2, 1906, from 9.30 a.m. to 12.30 p.m., and from 2 to 5 p.m. The Professors and Lecturers will be present to confer with intending students and to give them advice respecting their courses of study. Women students are requested to consult the Mistress of Method as to their studies before presenting themselves to

<sup>1</sup> For information respecting the School of Medicine, see page 288.

the Vice-Chancellor. The Registrar will be in attendance to receive the fees and register students whose courses of study have been approved by the Vice-Chancellor.

All students (excepting those entering the Department of Agriculture<sup>1</sup>) are expected to register their names on one of these days.

# ENTRANCE EXAMINATIONS

# 1. For Degree Students

All students who intend to present themselves as candidates for a degree in the University of Leeds are required, before entering upon their degree course, to have passed the Matriculation examination of the Universities of Manchester, Liverpool, Leeds and Sheffield, or some examination recognised by the Joint Matriculation Board of those Universities as exempting from the Matriculation examination. For particulars of the Matriculation examination, see page 129.

# 2. For other Students

Students under seventeen years of age who wish to pursue a course of study in the day classes of the University without proceeding to a degree are required, before entering, to have satisfied *one* of the following requirements :

- (a) To have passed the Matriculation examination
- (b) To have passed some other public examination approved by the Vice-Chancellor.
- (c) To have gained a scholarship or exhibition awarded by the University after open competition.
- (d) To have passed the special examination for entrance to the Engineering departments (see below), including English Composition and Dictation.
- (e) To have passed an Entrance examination<sup>2</sup> in each of the following subjects: Arithmetic, including decimals and proportion; Algebra, to simple equations; Geometry, the first book of Euclid or its equivalent; English Composition and Dictation.

<sup>1</sup> The winter course in Agriculture begins Monday, October 15.

<sup>2</sup> This examination will be held on Tuesday, October 2, 1906, at 2 p.m. No candidate can be examined whose name has not been notified to the Registrar by the morning of Monday, October 1.

The Vice-Chancellor may dispense with the requirement of an entrance examination in the case of students who are presenting themselves for one or two lecture courses only.

Candidates for admission to the departments of Civil, Mechanical, Electrical or Mining Engineering are required *either* to have passed the Matriculation or some other approved examination, including Mathematics, *or* to pass a special entrance examination.<sup>1</sup> This examination is not imposed, however, in the case of students who have taken a satisfactory position in the Evening Class examinations.

## FEES

All Fees are payable to the Registrar. Cheques should be made payable to "The University of Leeds," and crossed "Beckett & Co."

# 1. Entrance Fee

In addition to class fees, each student attending any regular day class for which a fee of  $\pounds_{II}$  is. or upwards is charged will be required to pay on entering the University a registration and library fee of  $\pounds_{II}$  is. Day students attending one or two courses of lectures only may, if they prefer it, pay in lieu of the registration and library fee a sessional fee of 7s. for each class attended.

### 2. University Union Fee

The subscription of 10s. 6d. per year to the University Union is obligatory, with certain exceptions, on students attending the University for more than six hours per week, and is payable to the Registrar at the beginning of the session. This subscription entitles students to the use of the common-rooms (which are supplied with the daily papers, current periodicals, &c.), to free instruction in the University gymnasium, and to the use of the athletic ground and tennis courts.

# 3. Lecture and Laboratory Fees

## (a) General Regulations

The fees for lecture and laboratory courses are payable in advance. The Registrar will supply a class ticket entitling the student to attend the courses for which fees

<sup>1</sup> For particulars of subjects, dates, and conditions of this examination see page 247.

have been paid: this class ticket must be presented by the student to the Professor or Lecturer whose courses he attends, before entering on the course.

In the case of the withdrawal from the University of any student during the session, no claim to a return of fees is recognised.

Students who attend all the classes constituting the complete course required for a degree examination, or for a diploma of the University, or for the Associateship of the Institute of Chemistry, may compound for the lecture fees at a reduction of one tenth.

# (b) Lecture Fees

The fee for each course of lectures is appended to the syllabus of the course.

Where a student for special reasons pays for only one or two terms, the following fees will as a rule be charged :

Where the Fee for the	The For Two T will	The Fee for One Term will be					
Session is £ s. d.		d.		£ s. d.			
	14						
III 6	 I 5	0		ΟI	5	0	
2 2 0	 I 15	0		I	I	0	
2 12 6	 2 2	0		I	5	0	
3 3 0	 2 12	6		ΙI	I	6	
3 13 6	 2 17	6		ΙI	5	0	
4 4 0	 3 3	0		2	2	0	
550	 4 4	0		2 I	2	6	

Where a class meets for two terms only, the fees will be as follows :

Where the		The Fee for One				
Two Te			Term will be			
£ s.	d.		to	3.	d.	
II	0		 0	15	0	
III	6		 I	I	0	
2 2	0		 I	5	0	
2 12	6		 I	ΙI	6	
3 3	0		 2	2	0	
3 13	6		 2	5	0	
4 4	0		 2	12	6	
5 5	0		 3	3	0	

# (c) Laboratory Fees

The following are the fees payable for Laboratory and other practical work in each of the following departments, viz.: Physics, Chemistry, Biology, Geology, Engineering, Fees

Electrical Engineering, Mining, Textile Industries, Dyeing and Tinctorial Chemistry, Leather Industries. Six hours are counted as one day:

Days Fee fo per Week. the Sessi			Fee for Two Terms.					Fee for One Term.			
per mee		£	S.	d.		£	s.	d.		£ s.	d.
12		3	3	0		2	12	6		III	6
1		5	5	0		4	4	0		2 1 2	6
112		7	7	0		5	15	6		3 3	0
2	111	9	9	0		6	16	6		3 13	6
$2\frac{1}{2}$		ΙI	ΙI	0		7	17	6		4 4	0
3	111	13	13	0		9	9	0		5 5	0
31		15	15	0		11	0	6		5 15	6
4		16	16	0		12	I	6		6 6	0
41		17	17	0		I 2	12	0		6 16	6
5		18	18	0		13	13	0		7 7	0
$5\frac{1}{2}$		19	19	0		14	3	6		7 17	6
6		21	0	0		15	4	6		8 8	0

# (d) Fees for Research Students

Persons desirous of pursuing original Research can be admitted, subject to certain regulations, to any of the University laboratories on reduced terms, which may be obtained on application to the Registrar. Applications for admission must be made to the head of the department concerned, and the admission is subject to the approval of the Council after report received from the Senate.

# (e) Fees for Complete Courses

The fees for complete courses of lectures and laboratory work qualifying for degrees and diplomas vary according to the subjects taken. The following estimates are in most cases only approximate.

- Matriculation. The cost to a student taking in the University the full course of lectures for the examination is about £19, inclusive of the Entrance and Union fees.
- Degree of B.A. The fees for complete courses qualifying for the Intermediate, Final (Ordinary), and Honours examinations, amount to about  $\pm 16$  in each year, exclusive of the Entrance and Union fees, and of fees for any laboratory work that may be required for the Intermediate examination.
- Degree of LL.B. A composition fee of  $\pounds 8$  8s. in each year; composition fee covering the lectures for the degree and for the Solicitors' examination  $\pounds 10$  10s. in each year. These fees do not include Entrance and Union fees, or fees for any laboratory work that may be required for the Intermediate examination,

Degree or Diploma in Commerce. About £18 in each year.

- Diploma in Education. Composition fee of £14 14s., exclusive of Union fee.
- Degree of B.Sc. The fees for complete courses qualifying for the Intermediate, Final (Ordinary), and Honours examinations, amount to about £25 in each year, exclusive of the Entrance and Union fees. If the courses taken include much laboratory work, the fees are somewhat higher.

Departments of Engineering, Electrical Engineering, Mining. The fees for a full year's course in each amount to about  $\pounds 30$ .

Departments of Textile Industries, Dyeing and Tinctorial Chemistry, Leather Industries. The fees for a full year's course in each amount to about  $\pounds 25$ .

Agriculture. Composition fees, for winter course  $\pounds_{10}$ , for summer course  $\pounds_{5}$ , inclusive of Entrance and Union fees.

#### 4. Examination Fees

No fee will entitle to admittance to more than *one* examination. Unless otherwise stated, the fee for a second or subsequent examination is the same as that for the first.

For the Matriculation examination,  $\pounds_2$ , and for each subsequent examination,  $\pounds_1$ .

For the Intermediate examination for the degree of B.A., or B.Sc., or I.L.B., or B.Com.,  $\pounds_{I}$ 

For the Final examination for the Ordinary degree of B.A., or B.Sc., or LL.B., or B.Com.,  $\pounds_1$ .

For the Final examination for the degree of B.A. or B.Sc., with Honours,  $\pounds 2$ .

For the examination for the degree of M.A. or M.Sc.,  $\pounds_1$ . For the examination for the diploma in Education,  $\pounds_2$ . On application for the degree of Doctor,  $\pounds_5$ .

#### 5. Degree Fees1

On the conferment of any degree in the Faculties of Arts (including Commerce and Law) and Science,  $\pounds_5$ .

# ACADEMIC DRESS

All Hoods are to be of a Green shade, combined with Black, White, Scarlet, or with one another, to produce the variations required for the several Degrees, namely :

B.A., a self-coloured Hood of Dark Green shade.

B.Sc., a self-coloured Hood of Middle Green shade.

<sup>1</sup> These do not apply to Honorary Degrees,

LL.B., a self-coloured Hood of Light Green shade.

M.B. and Ch.B., a Hood of Dark Green, lined with Light Green.

M.A., a Dark Green Hood, with White Lining.

M.Sc., a Middle Green Hood, with White Lining.

M.Ch., a Dark Green Hood, edged with Light Green, and lined with White.

All Bachelors' Hoods are to be lined, and all Bachelors' and Masters' Hoods are to be of the single or Oxford pattern.

The Doctor's Gown is to be of Scarlet, with facings and sleeve linings of the shade of Green distinctive of his faculty. The Hood is to be of Scarlet, lined with the distinctive shade or shades of Green. The Full Dress Cap is to be of the usual pattern, with a Gold Cord, and a lining of the shade of Green distinctive of the faculty.

# **REGULATIONS FOR STUDENTS**

# General

1. Students who do not return punctually at the beginning of the term are liable to be refused permission to keep the term. In case of delay in entering, due to illness or other unavoidable cause, a communication must be made to the Vice-Chancellor.

2. Students are required to keep the Vice-Chancellor and Registrar informed of their addresses. Any alteration of address must be communicated without delay.

3. Students are required to provide themselves with the books used in the classes which they attend, and with a copy of the University Calendar.

4. A student dismissed for idleness or misconduct will forfeit all fees and privileges.

5. Students are required to replace or repair any apparatus or other property destroyed or damaged by their fault.

6. The Students' Common Rooms are under the management of the University Union, and the Committee of the Union are empowered to impose fines in case of damage done to the property in their charge. An appeal against any decision of the Union may be made to the Senate. 7. The use of a locker may be secured by the deposit of 28. 6d. with the Hall Porter. A charge of 18. per session will be made, the balance of the deposit money being repaid at the end of the session when the key is returned. A student will be charged for repairing any damage to the locker while in his possession, or for loss of keys, &c. Lockers are also provided for members of the Tennis Club, and may be used on the same terms as those for books, &c.

# Lectures

8. No student is permitted, except with the leave of the Vice-Chancellor, to attend any lecture course or laboratory work until he has received from the Registrar his class ticket, which must be presented to the Heads of the Departments in which he enters before his course of study is begun.

9. Students who fail in their class examinations may be required to repeat their courses of study or to leave the University. In cases of repetition of courses the full fees will have to be paid for the repeated course.

10. When a student is absent from illness or other unavoidable cause a written explanation must at once be sent to the Vice-Chancellor, who will communicate it to the Heads of the Departments in which the student is attending. Students desiring leave of absence must obtain it from the Vice-Chancellor.

# Vacations

11. The Senate desire it to be understood that study is expected from students during vacations. Arrangements are made by which the laboratories are open during a portion of the Long Vacation to students capable of independent work. Application for admission must be made to the Heads of Departments, with whom the decision as to the suitability of students for admission rests. The scale of fees chargeable can be obtained at the Registrar's office.

In many cases the vacation time of students in technical departments can be most profitably employed in obtaining practical experience in works. Assistance to obtain admission to works will, so far as practicable, be given by

# Hall of Residence

the Professors. In other cases, before the vacation begins, Professors and Lecturers will be prepared to make recommendations to students as to the private study which should be carried on during the vacation in preparation for the next session.

# GYMNASIUM

# Instructor : MASON CLARKE.

The Gymnasium is free to all members of the University Union. It is reserved for the use of women students at suitable hours which, together with those arranged for other classes, will be announced at the beginning of the session.

# LYDDON HALL

(Licensed by the Court of the University as a Hall of Residence)

## Visitors :

N. BODINGTON, M.A., Litt.D., Vice-Chancellor Professor A. S. GRÜNBAUM, M.A., M.D., F.R.C.P., D.P.H., Dean of the Faculty of Medicine

THE REV. SAMUEL BICKERSTETH, D.D., Vicar of Leeds THOMAS PRIDGIN TEALE, M.A., D.Sc., F.R.S.

## Resident Warden:

HERBERT ROWE, Senior Hon. Surgeon, the Public Dispensary, Leeds.

#### Sub-Warden:

J. KAY JAMIESON, M.B., Demonstrator, Department of Anatomy.

The object of this Institution is to supply men students with the advantages of a common collegiate life, by providing a Hall of Residence similar to those which have been established in connection with the Victoria University of Manchester, with the Edinburgh University, and with some of the London Medical Schools.

The Hall of Residence has been erected upon a suitable site within five minutes' walk from the University, and is furnished with every attention to the health and comfort of the students. The accommodation consists of Dining Hall, Recreation Room, and other rooms for common use, and a separate room furnished as a private study and bedroom for each student. The charge is twenty-one guineas for each of the first and second terms and eighteen guineas for the third term for students in the Faculties of Arts, Science, and Technology, who keep a session of about 33 weeks; and twenty-three guineas a term for students in the School of Medicine, whose session lasts about 38 weeks.

Applications for admission should be sent to the Warden, Lyddon Hall, Virginia Road, Leeds, who may be seen at the Hall on any day between one and two o'clock.

# LODGING AND BOARDING HOUSES

A List of Lodging and Boarding Houses which have been inspected on behalf of the University will be supplied by the Registrar on application.

# REFECTORY

For the convenience of students, dinners are served daily in the University Refectory, from 12.30 to 2 p.m. Cold meats may also be obtained after the latter hour; tea, coffee, and other light refreshments up to 6 p.m. The Refectory is closed on Saturdays at 2 p.m.

Term tickets may be had on application to the Registrar, entitling students to dine at the Refectory, College Road, daily (except Saturdays) during the session. The cost of such tickets, which must be prepaid, is  $\pounds 6$  10s. per session or  $\pounds 2$  10s. per term for men students, and  $\pounds 5$  10s. per session or  $\pounds 2$  5s. per term for women students. Places will be reserved for those who pay for their dinners by the term.

### UNIVERSITY LIBRARY

Honorary Librarian : Professor CLAPHAM Librarian : Miss FANNY J. PASSAVANT Assistant : Miss FLORENCE M. EKINS

The Library is open (a) daily during Term and the months of July and September from 9 a.m. to 5.30 p.m. (on Saturday from 9 a.m. to 12.45 p.m.); (b) during the second half of August and during the Christmas and Easter vacations from 10 a.m. to 1 p.m.

It is closed during the first half of August, one week at Christmas, Good Friday, and the following Saturday, Monday, and Tuesday, and Whit-Monday and Tuesday.

#### General Regulations

I. No book shall be removed from the Library unless the borrower shall have first filled in the form provided and handed it to a member of the Library staff.

2. No mark of any kind may be made in the Library books or periodicals. Any loss of, or injury to, a book shall be reported by the Librarian to the Library Committee, who shall require the person responsible to pay a sum not exceeding that which will be required to make the loss or injury good.

3. The Honorary Librarian has power to suspend the Library privileges of any person who breaks the rules of the Library.

4. No atlases, dictionaries, or other books with special labels shall be taken out of the Library, except in so far as provided in subsequent paragraphs.

5. No person shall be allowed to take a book out of 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.

6. Persons not members of the University who are engaged in special studies may be given the right to use the Library by the Honorary Librarian.

7. The Honorary Librarian shall be at liberty to grant special facilities for the use of books during a limited time to any person entitled to the use of the Library.

### Regulations affecting Members of the Academic Staff

8. Any member of the Academic Staff shall be entitled to take out such books as he requires and to retain them until the end of term, unless he receives a notice that any of these books are overdue, in which case such book or books shall be returned without delay to the Library. A book shall be regarded as overdue when it has been in the possession of the borrower for a fortnight and is required by some other person.

9. A book which is not overdue according to Rule 8 may be renewed for the vacation on application in writing to the Librarian.

10. All books must be brought back to the Library at the end of the third term, but books not required by any other person may be renewed on presentation.

11. Current University Calendars and current serials may be taken out of the Library for one night only, and not before 5 p.m. Other unbound serials may be taken out of the Library for a period not exceeding 48 hours.

# Regulations affecting present and past Students of the University

12. All graduates of the University and Associates of the Yorkshire College are entitled to the free use of the Library.

13. All registered students who have paid the registration and Library fee, or the sessional fee, are entitled to the use of the Library so long as they are in attendance upon the day classes in the University.

14. All other students, all evening students, and all past students who are not graduates are entitled to the use of the Library on payment of a fee of 2s. 6d. per session.

15. Not more than three volumes, whether of the same or of different works, may be entered to the same person at one time.

16. Every book must be returned to the Library on or before the Saturday in the week following that in which it was taken out. A book may, however, be renewed from week to week until four weeks have elapsed since its first issue, provided that no application for the use of the book by another person has been received in the meantime.

17. All books must be brought to the Librarian for renewal, except when an application for renewal has been made and granted on the day before that on which the return of the book falls due. Applications for renewal may be made personally or by post.

18. At the end of each term all books must be returned to the Library.

19. Books of reference and books which, owing to their constant use, are temporarily placed on the list of books of reference, may not be removed from the Library (except under Rule 20), until after 5 p.m., and then only on condition that they be returned before 10 o'clock on the following morning.

20. Students provided with a written recommendation from a Professor or Lecturer shall be entitled to take out books of reference, but books taken out under this rule must be returned to the Library before the person using them leaves the University buildings.

21. Any person borrowing a book under Rule 19 or Rule 20, and failing to return it by the time therein specified, shall be fined 2d. a day, and any person who does not comply with Rule 18, shall be fined 1d. a day for every day a book is kept out after it ought to have been returned. A notice shall be posted to the borrower on the business day following that on which the return of the book was due, informing him that a fine is being incurred.

22. Students desiring to borrow books for the vacation are required to procure a recommendation signed by a Professor or Lecturer of the University. Printed forms for this purpose may be obtained from the Librarian.

# CECIL DUNCOMBE OBSERVATORY

### Curator pro tem. : A. R. DWERRYHOUSE, D.Sc.

The Cecil Duncombe Observatory was opened on May 4th, 1906, by Dr. H. H. Turner, Savilian Professor of Astronomy in the University of Oxford. It is built on a site in Woodhouse Moor contributed by the Leeds City Council. The telescope, an  $18\frac{1}{4}$  inch reflector of the Newtonian type, was given to the University by Major Duncombe, of Nawton Grange, and formerly belonged to his father, the late Hon. Cecil Duncombe. Its large mirror, made by Mr. G. Carver,

# Observatory

of Walpole, Sussex, for Dr. Common, was the first successful large glass mirror made in England. In addition to the large equatorial there are a 3 inch transit instrument and a sidereal clock.

The Observatory is administered by a Committee representing the University, the Leeds Astronomical Society, and the Leeds City Council.

#### Regulations

I. The Observatory and instruments shall be under the control of the Curator, and no person shall be allowed to go into the Observatory or to use the instruments unless he is present, except as provided for in Rule 6.

2. The Curator will attend at the Observatory, on an average, two nights per week during the session of the University, when persons eligible under Rule 4 may attend. All arrangements as to classes and observing nights must be made with the Curator.

3. Not more than twelve persons shall be admitted to the Observatory at any one time.

4. The following will be allowed to use the Observatory under Rule 2:

- (a) Members of the University staff;
- (b) Students of the University, on the recommendation of heads of departments;
- (c) Members of Astronomical Societies;
- (*d*) Teachers in the schools of the Leeds Education Committee, in groups of not more than six persons;
- (e) Senior scholars from schools of the Leeds Education Committee, if accompanied by a teacher, who should, if possible, be one interested in the subject;
- (f) Teachers in Leeds schools other than those of the Leeds Education Committee, by special arrangement with the Curator;
- (g) Such other persons as the Observatory Committee may from time to time determine.

5. Persons wishing to use the Observatory under Rule 4, sections (d) and (e), must apply for a recommendation to the Leeds Education Committee.

6. Permission to use the Observatory for research work in the absence of the Curator may be granted by the Observatory Committee (1) to Professors and Lecturers of the University teaching Physical Geography or Surveying, who may, subject to Rule 3, use the Observatory for class purposes, (2) to such persons as may be specially recommended by the Committee of an Astronomical Society as competent to use the instruments, it being understood that the permission will apply to the authorised person only, who may not admit any other person, and (3) to other persons approved by the Observatory Committee. 7. A list of persons authorised to use the Observatory under Rule 6 shall be supplied to the hall porter at the University, who will issue a key of the Observatory to the authorised observer on personal application.

The key must be returned immediately on leaving the Observatory, or before noon on the day following.

8. Permission to use the Observatory under Rule 6 may be withdrawn by the Committee at any time; and the Observatory will only be available under that rule when it is not required for class purposes.

9. Persons using the instruments under Rule 6 shall be held responsible for their proper use during the time they or their students may occupy the Observatory, and shall be liable to make good any damage they or any of them may do to the instruments.

They will also be responsible for the safe closing and locking of the building on leaving it.

IO. A book shall be kept in the Observatory in which all persons using the instruments will be expected to enter their names, with the hours during which they have been present, and the nature of the work upon which they have been employed.

11. The Curator is empowered to refuse admission to any person, or to require him to withdraw from the Observatory, without giving any reason to the person concerned; but any such action shall be reported to the Committee at its next meeting.

# MATRICULATION EXAMINATION

All communications relating to this examination should be addressed to "The Secretary, Joint Matriculation Board, Owens College, Manchester."

The Matriculation examination is conducted by a Joint Board representing the Victoria University of Manchester, the University of Liverpool, the University of Leeds, and the University of Sheffield. Candidates for degrees in either of these Universities are required to have passed this examination, or to have obtained a certificate of exemption therefrom, before beginning a degree course. The examination is held in July and September of each year in the buildings of each University. The July examination is also held at schools as a form examination. Information as to the conditions may be obtained from the Secretary to the Joint Board.

Candidates must apply to the Secretary of the Joint Board for a form of entry, which must be forwarded to the Secretary on or before June 2 or September 1 respectively, accompanied by the proper fee. The fee for the examination is  $\pounds_2$ ; for each subsequent Matriculation examination,  $\pounds_1$ . Cheques and postal and money orders should be made payable to the Secretary of the Joint Matriculation Board, and crossed "Williams Deacon's Bank, Ltd., Chorlton-on-Medlock Branch."

The names of candidates who have passed the Matriculation examination are published in two divisions, the names in each division being arranged in alphabetical order.

The Board of Education accepts the Matriculation certificate under certain conditions for the purpose of admission to Training Colleges under Article 115 (d) of the code (see page 179), and of recognition as Assistant Teachers under 51 (b).

Women candidates who have passed the examination and taken two languages are eligible for the Honours examinations at Oxford.

E

<sup>1</sup> For particulars of the Matriculation examination in the Faculty of Medicine, see page 289.

# Matriculation Examination

Provided Latin be one of the subjects taken, the certificate is accepted by the Law Society in lieu of the Preliminary examination. Provided Mechanics and a second science subject be taken, the certificate is accepted by the Institution of Civil Engineers in lieu of the Studentship examination.

# Subjects of Examination

Candidates presenting themselves for the Matriculation examination are required to satisfy the Examiners in :

1. English Language or Literature, and English History

2. Mathematics

3. Three of the following, one of which must be a language

- i. Greek
- ii. Latin
- iii. French
- iv. German
- v. Some other Modern Language approved by the  $\operatorname{Board}^1$
- vi. Elementary Mechanics
- vii. Chemistry
- viii. Geography or Natural History.

# Details of Subjects

ENGLISH LANGUAGE, LITERATURE, AND HISTORY :

An English essay. *Either* (a) Elements of English grammar, including outlines of the general history of the English language; or(b) a set book or books in English literature. Outlines of English history.

#### **MATHEMATICS**:

Arithmetic. The elementary geometry of triangles, parallelograms, and circles, and of similar rectilinear figures.<sup>2</sup> Algebra to quadratic equations (inclusive), with the arithmetical and geometrical progressions and an elementary treatment of irrational quantities and of proportion.

<sup>1</sup> Application for permission to present this must be made to the Secretary, Joint Matriculation Board. Owners College, Manchester, and the fee must be paid on or before March 1st of the year in question.

<sup>2</sup> These subjects are covered by Euclid i, ii, iii, and vi. (1-19 and 33.)

GREEK :1

*Either* one prose and one verse book *or* passages from unprepared books, with grammar questions in each case. Grammar. Translation at sight of easy Greek passages into English.

LATIN :1

*Either* one prose and one verse book *or* passages from unprepared books, with grammar questions in each case. Grammar. Translation at sight of easy Latin passages into English. Translation of easy sentences from English into Latin.

FRENCH :1

Grammar (the questions in grammar will not involve more than accidence and elementary syntax). Translation from two prescribed French books or passages from unprepared books, with grammar questions in each case. Translation at sight of easy French prose into English. Translation of English passages into French.

GERMAN :1

Grammar (the questions in grammar will not involve more than accidence and elementary syntax). Translation from two prescribed German books or passages from unprepared books, with grammar questions in each case. Translation at sight of easy German prose into English. Translation of English sentences into German.

OTHER MODERN LANGUAGES<sup>2</sup>: details as for French and German.

**ELEMENTARY MECHANICS:** 

The elementary portions of statics, kinetics, and of the properties of liquids and gases, including: Laws of motion. Uniform acceleration. Composition and resolution of forces in one plane. Moments of forces. Work and energy. Centre of gravity. Uniform circular motion. Simple pendulum. Direct impact. Fluid pressure. Specific gravity. Boyle's Law.

ELEMENTARY CHEMISTRY :

General properties of matter. Chemical combination and decomposition. Preparation, classification, and chemical behaviour of the chief elements and their compounds, especially of the nonmetals. The outlines of chemical theory.

#### GEOGRAPHY:

- *Physical Geography*: The agents at work on and beneath the surface of the earth. Phenomena resulting from earth-heat. Distribution of land and water.
- *Political and Commercial Geography:* Political and economic effects of natural features and conditions. Outlines of geography of the British Empire (including historical geography). Political and commercial geography of the United Kingdom.

<sup>1</sup> Candidates, in order to pass, must satisfy the Examiners in translation at sight and grammar.

<sup>2</sup> Application for permission to present this must be made to the Secretary, Joint Matriculation Board, Owens College, Manchester, and the fee must be paid on or before March 1st of the year in question.

#### NATURAL HISTORY:

A.-Botany: 1. The structure and mode of life of plants.

- (a) The elementary facts of the nutrition of green plants as shewn by simple experiments.
- (b) The form and function of roots, stems, and leaves.
- (c) The modifications of the vegetative organs in common British examples of water-plants, heath-plants, plants inhabiting dry places, climbing plants, insectivorous plants, and parasites.
- (d) The structure and function of a typical flower.
- (e) Modes of pollination of common flowers.
- (f) Modes of dispersal of seeds and fruits.
- (g) The structure of a seed and its mode of germination as seen in the maize, the bean, the melon, and other common seeds.
- (h) Vegetative reproduction of plants by bulbs, by tubers, and in other ways.
- The classification of plants. The general characters of the following British natural orders: Liliaceæ, Gramineæ, Ranunculaceæ, Cruciferæ, Leguminosæ, Rosaceæ, Primulaceæ, Labiatæ, Compositæ, Umbelliferæ, Cupuliferæ.
- B.-Zoology:
  - (a) The general structure of a mammal; knowledge of the chief features of the skeleton is expected.
  - (b) The external form, mode of life and habits of the bat, cat, dog, sheep, horse, kangaroo, and whale.
  - (c) The wing, feathers, beak, and foot of a bird. The flight of birds
  - (d) The nests and eggs of birds, as exemplified by two or three common British species. A fowl's egg. The place of formation of a chick : its nutrition and respiration while in the egg.
  - (e) The general structure and life-history of a frog.
  - (f) The general structure and mode of life of a fish.
  - (g) The external features and mode of life of a snail, a cockroach, and an earth-worm.
  - (h) The life-history of either a moth or butterfly, and of a pondsnail.
  - (i) One of the following groups:
    - i. (Marine animals). The general structure, mode of life, and life-history of a sea-anemone, a reef-forming coral, an oyster or edible mussel, a crab, a star-fish or seaurchin.
    - ii. (Inland animals). The general structure, mode of life, and life-history of hydra, a pond-mussel, a crayfish, chironomus ('blood-worm,' 'harlequin-fly'), and a spider.

# Books prescribed for 1907

GREEK, one book from each of (a) and (b):

- (a) Thucydides vi, cc. xxx-liii, and lx-cv, or Plutarch, Themistocles.
- (b) Homer, Odyssey xxiii, xxiv (Candidates will be expected to parse and give the Attic equivalents of Homeric forms of common occurrence, but of these only) or Euripides, Andromache (lines 1-273, 309-463, 502-765, 802-1008, 1047-1288).

LATIN, one book from each of (a) and (b):

- (a) Caesar vii, cc. i-liv, or Cicero, De Imperio Cn. Pompei [Pro lege Manilia.]
- (b) Vergil, Aeneid xi, or Ovid, Fasti iii (as in Hallam's edition).

FRENCH :

Edmond About, Le Roi des Montagnes, ed. Ropes (Pitt Press) and either Molière, Le bourgeois gentilhomme (Macmillan & Co.), or Merimee, Colomba (Pitt Press).

GERMAN :

Schrader, Friedrich der Grosse (Macmillan & Co.), and either Riehl, Fluch der Schönheit, ed. Thomas (Heath, Boston), or Schiller, Lied von der Glocke, ed. Chamberlin (Heath, Boston).

ENGLISH, one selection from each of (a), (b), and (c):

- (a) Shakspere, Macbeth, or Shakspere, A Midsummer Night's Dream.
- (b) Palgrave, Golden Treasury, ed. Fowler, book iv or Byron, Childe Harold, cantos iii and iv.
- (c) Bacon, Essays [of Truth, of Death, of Revenge, of Adversity, of Simulation and Dissimulation, of Parents and Children, of Atheism, of Superstition, of Cunning, of Friendship, of the true greatness of Kingdoms and Estates, of Plantations, of Youth and Age, of Gardens, of Studies] or Addison and Steele, The Sir Roger de Coverley Papers, ed. W. H. Hudson (Heath, Boston).

### Higher Papers

Alternative papers of a higher standard are set at the July examination in English Literature, English History, Mathematics, Greek, Latin, French, German, Mechanics, and Chemistry.

For the award of certain scholarships, the examination will also include additional papers of three hours each in the subjects of : (1) Physics, (2) Mechanical Drawing.

### Matriculation Calendar

For full information as to the Matriculation examination, including reprint of examination papers, see the Calendar of the Joint Matriculation Board, to be obtained from the Secretary, price 6d., or post free 8d.

A prospectus, containing the complete regulations but without examination papers, is issued free.

# DEGREES IN ARTS

Ordinance.

1. The degrees in Arts shall be :

Bachelor of Arts (B.A.) Master of Arts (M.A.) Doctor of Letters (Litt.D.).

# DEGREE OF BACHELOR OF ARTS

2. The degree of Bachelor of Arts shall be conferred either as an Ordinary degree or as a degree with Honours.

3. All candidates for the degree of Bachelor of Arts shall be required to have passed the Matriculation examination,<sup>1</sup> and thereafter to have pursued approved courses of study for not less than three academic years.

# Ordinary Degree of Bachelor of Arts

4. The complete course of study for the Ordinary degree of Bachelor of Arts shall be divided into two parts, called respectively the Intermediate course and the Final course.

5. Every candidate shall be required to pass two examinations, the Intermediate and the Final.

6. The Intermediate and Final examinations shall ordinarily be held in June of each year.<sup>2</sup> There shall also be a supplementary Intermediate 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 an Intermediate 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 committees, on report from the separate examination committee concerned, may determine.

8. Candidates who have failed at a Final examination may present at the June examination of the following year those books and periods in which they have already been examined.

<sup>1</sup> It is not necessary to have passed in Latin as one of the subjects at the Matriculation examination, but a student cannot enter upon an Arts course without some knowledge of Latin.

<sup>2</sup> In 1907 they will begin on Monday, June 10. The latest day for entry will be May 1.

9. All candidates shall be required, before presenting themselves for the Intermediate or Final examination, to furnish to the Registrar certificates testifying that they have regularly attended the prescribed courses of study, and performed the class exercises to the satisfaction of the Professor or Lecturer, in each of the subjects which they offer at the examination.

# Intermediate Course and Examination

10. Every candidate shall be required, after passing the Matriculation examination, to attend during one academic year approved courses of study in five subjects, and to pass in each of the subjects selected, viz. :

- i, ii. Two languages from the following list: Greek; Latin; French; German; one of which must be Greek or Latin.
  - iii. Either (a) English Literature ; or (b) History (Ancient or Modern).
  - iv. Either (a) Logic; or (b) Mathematics; or (c) one of the following Natural Sciences: Physics, Chemistry, Geology.
  - v. English Language or any subject under i, ii, iii, iv not already selected, provided that no candidate may take (a) both Ancient and Modern History; (b) two Natural Sciences.

The examination in each modern language shall include an oral examination.

Detailed subjects of study and of examination.

Regulations

# GREEK :

Prose composition. Translation at sight from Greek into English. Prescribed books : portions from two authors, one prose and one verse, to be studied in their literary and linguistic aspects.

Books for 1907 : Xenophon, Memorabilia i ; Aristophanes, Nubes.

### LATIN :

Prose composition. Translation at sight from Latin into English. Prescribed books: portions from two authors, one prose and one verse, to be studied in their literary and linguistic aspects.

Books for 1907; Cicero, Divinatio in Caecilium, First Verrine; Virgil, Aeneid i, ii. FRENCH :

Prose composition. Syntax of the French language. Translation at sight from French into English. Prescribed books: at least two texts, including both prose and verse, to be studied in their literary and linguistic aspects. Dictation, reading aloud and conversation in French.

Books for 1907: Voltaire, Lettres Choisies; Andre Chenier, Extraits; Balzac, Une Tenebreuse Affaire.

## GERMAN :

Prose composition. Syntax of the German language. Translation at sight from German into English. Prescribed books: two texts, one prose and one verse, to be studied in their literary and linguistic aspects. Dictation, reading aloud, and conversation in German.

Books for 1907 : Freytag, Soll und Haben, ed. Files, pp. 1-80; Goethe, Hermann und Dorothea, ed. Wagner, cantos i-4.

#### ENGLISH LITERATURE:

A period of English Literature. Books prescribed for special study.

Period for 1907; 1700-1765 A.D.

Books for 1907: Palgrave, Golden Treasury, book iii; Addison, Golden Treasury selections; Swift, Gulliver's Travels; Johnson, Lives of Pope and Swift; Pope, Essay on Man, book i, Epistle to Arbuthnot; Shakespeare, Henry IV, Part I; Chaucer, Prologue to Canterbury Tales.

## ENGLISH LANGUAGE :

History of the English Language. Old and Middle English prose; books and passages selected from works before the close of the Fourteenth Century.

Books for 1907: Sweet's Anglo-Saxon Primer; the reigns of Alfred and Edward the Elder in the Anglo-Saxon Chronicles; Morris, Specimens of Early English, vol. i, extracts x, xviii; Chaucer, Prologue to Canterbury Tales.

## ANCIENT HISTORY:

Introduction to Ancient History, with special reference to selected periods of Greek and Roman History.

Periods for 1907: Greek History, 490-399 B.C.; Roman History, 134-44 B.C.

#### MODERN HISTORY :

A selected period of Modern History.

Period for 1907: Modern European History from 1763.

#### LOGIC:

The elements of Deductive and Inductive Logic.

136

#### **MATHEMATICS**:

Trigonometry to the solution of triangles. The first principles of Analytical Geometry and the elements of the Differential Calculus, as applied to the tracing of graphs and the determination of maxima and minima ordinates. The Algebra required for the above subjects.

#### **PHYSICS**:

The properties of matter, the chief phenomena of Sound, Heat, Light, Electricity and Magnetism, treated in an elementary manner; Practical Physics.

CHEMISTRY:

The general principles of Inorganic Chemistry and their application; the elements of Organic Chemistry; Practical Chemistry.

GEOLOGY :

General Physical and Stratigraphical Geology, and Geology in relation to the study of Geography.

# Final Course and Examination<sup>1</sup>

11. Every candidate shall be required to attend approved Ordinance. courses of study in three principal subjects and one subsidiary subject, and to pass in each of the subjects selected. The same subject may not be taken both as a principal and as a subsidiary subject. An essay paper shall be set for all candidates at the Final examination.

12. The course of study in each principal subject shall extend over two academic years, and the course of study in the subsidiary subject shall extend over one academic year.

13. The principal subjects shall be selected from the following list: Greek, Latin, French, German, English Language and Literature, History, Philosophy, Economics, Education, Pure and Applied Mathematics. Every candidate shall be required to take as a principal subject one of the following: Greek, Latin, French, German. The examination in each modern language shall include an oral examination.

14. The subsidiary subjects shall be selected from the following list: English Literature, History, Philosophy, Economics, Education, Pure Mathematics, Applied Mathematics. The course of study in a subsidiary subject may be taken either in the first or second year of the Final course.

<sup>1</sup> In certain cases, students who began their course for the degree under the scheme previously in force may obtain permission to present themselves for the Final examination according to the regulations appearing in the Calendar for 1904-5.

# Degrees in Arts

15. Candidates who have attended, during the first year of their Final course, the prescribed course of study in a subsidiary subject, may present themselves in June of that year for examination in such subsidiary subject. Part of the examination in Education, to be defined by Regulation, may also be taken at the end of the first year of the Final course.

#### Regulations

# Detailed subjects of study and of examination.

## I. Principal Subjects, studied for Two Years.

### GREEK :

- Prose composition. Translation at sight from Greek into English. The study of portions from various authors, three of which (two prose and one verse or one prose and two verse) will be prescribed as subjects of the Final examination.
- Books for 1907: Demosthenes, *De Corona*; Homer, *Iliad*, i, vi, and *Odyssey* ix, xi.

#### LATIN :

- Prose composition. Translation at sight from Latin into English. The study of portions from various authors, three of which (two prose and one verse or one prose and two verse) will be prescribed as subjects of the Final examination.
- Books for 1907 : Tacitus, Annals i ; Horace, Satires.

#### FRENCH :

The study of various texts, three of which (two prose and one verse, or one prose and two verse) will be prescribed as subjects of the Final examination. Translation at sight from French into English. Principles of Phonetics, and Principles of Historical Grammar. Composition and the study of style. A period or periods of French Literature. Dictation, reading aloud and conversation in French.

Book for 1907 : Victor Hugo, Notre Dame.

Period for 1907 : The French Novel from 1830 to 1850.

GERMAN :

The study of various texts, three of which (two prose and one verse, or one prose and two verse) will be prescribed as subjects of the Final examination. Translation at sight from German into English. Principles of Phonetics and Principles of Historical Grammar. Composition and the study of style. A period or periods of German Literature. Dictation, reading aloud and conversation in German.

Books for 1907 : Schiller, Wallensteins Lager and die Piccolomini; Goethe, Egmont.

Periods for 1907: Schiller's Life and Works; Goethe's Life and Works.

#### ENGLISH LANGUAGE AND LITERATURE :

### English Language.

- *First Year Course.* The elements of Old English, with prescribed books in Old English prose and unseen translation.
- Books for 1907 : Sweet, Anglo-Saxon Primer; Chaucer, Pardoner's Tale with Prologue to it; Old and Middle English Grammar.
- Second Year Course. A more advanced study of Old and Middle English, with prescribed books (prose and verse) and unseen translation.
- Books for 1907: Sweet, Anglo-Saxon Reader, extracts vi, vii, viii, xxvi; Ancren Riwle (Sweet's extracts); Chaucer, Knight's Tale.
- Candidates may, with the consent of the Board of the Faculty of Arts, be permitted to substitute a further study of English Literature for the above course in English Language.

### English Literature.

In each year the study of a selected period of English Literature, with a knowledge of prescribed books and questions of literary history and criticism arising from them.

Period for 1907: 1700-1784 A.D.

Books for 1907: Palgrave, Golden Treasury, book iii; Steele, Golden Treasury selections; Swift's Gulliver's Travels (Voyages to Lilliput and Brobdingnag); Pope, Epistle to Arbuthnot, Iliad book i; Johnson, Lives of Pope and Gray; Burke, Speech on Conciliation with America; Shakespeare, King Lear; Chaucer, Pardoner's Tale with Prologue to it.

### HISTORY :

First Year Course : A general sketch of European History.

- Second Year Course: Two prescribed periods of History, studied in connection with some of the original authorities and selected from the following: Greek, Roman, English, Constitutional, European, Economic History.
- Periods for 1907: Greek History, 445-399 B.C.; Roman History, 31 B.C.-180 A.D.; English History, 1714-1815 A.D.; European History, 1789-1815 A.D.; Economic History, the Commercial and Industrial History of England in the 19th Century.

#### **PHILOSOPHY**:

Two of the following :

- History of Ancient Philosophy: general outlines of Greek Philosophy, with a prescribed book or books.
- History of Modern Philosophy: general outlines of Modern Philosophy from Bacon to Kant, with a prescribed book or books.
- Psychology: systematic Psychology, with more detailed study of some part of the subject.
- Ethics : the general principles of Ethics, with the special study of selected ethical systems.

Theory of Knowledge: general outlines with the special study of selected works.

Books for 1907: Ancient Philosophy, Plato, Gorgias and Phaedo; Modern Philosophy, Locke, Essay concerning Human Understanding, books i, ii, iii, cc. 3, 6, iv, cc. 1-11.

**ECONOMICS**:

*First Year Course*: General principles of Economics, together with the outlines of recent economic history.

Second Year Course: More advanced treatment of economic principles, with description of industrial and commercial organisation.

EDUCATION :

The course extends over three years, and is divided into two parts: Part I., Theory of Education, extending over two years, with an examination at the end of the second year; and Part II., History of Education, extending over one year. Candidates presenting themselves for examination in Part II. must present their other principal subjects at the same examination. Candidates ordinarily attend the courses of instruction in Part I. during the year of their attendance on the Intermediate Course for the degree, and the first year of their attendance on the Final Course.

Part I. Theory of Education.

Functions and agents of Education. The ethical, logical, and psychological bases of mental and moral Education. The general principles of teaching, with application to the primary school curriculum. The general principles of discipline, with applications to school life. School organisation. The general principles of physical training with reference to the work of the school; school hygiene.

Part II. History of Education.

General outline of the history of educational thought in Europe from the Renascence to the present time, with special reference to England and special emphasis on the Nineteenth Century. A prescribed book. The book prescribed for 1907 is Plato, *Republic*, ii, iii, iv.

**MATHEMATICS**:

Pure Mathematics :

Analytical Geometry, up to but not including the general equation of the second degree. The more elementary portions of the Differential and Integral Calculus.

Applied Mathematics :

Statics and Dynamics as far as they can be taken without the Integral Calculus. Hydrostatics.

II. Subsidiary Subjects, studied for One Year.

ENGLISH LITERATURE :

A selected period of English Literature, with a knowledge of prescribed books and questions of literary history and criticism arising thereon.

Period and books for 1907 : The same as for English Literature as a principal subject.

HISTORY :

General sketch of European History since the Roman Empire.

**PHILOSOPHY**:

One of the subjects prescribed for Philosophy, taken as a principal subject.

**ECONOMICS**:

General principles of Economics, together with the outlines of recent economic history.

EDUCATION :

Part I. of the course prescribed for Education taken as a principal subject.

PURE MATHEMATICS:

Analytical Geometry up to but not including the general equation of the second degree. The more elementary portions of the Differential and Integral Calculus.

### **APPLIED MATHEMATICS:**

Statics and Dynamics as far as they can be taken without the Integral Calculus. Hydrostatics.

# Degree of Bachelor of Arts with Honours

I. Candidates for the degree of Bachelor of Arts with Ordinance Honours shall, except as hereinafter stated, be required to furnish certificates of having attended courses of instruction approved by the University and extending over not less than three academic years in one of the Honours Schools of the University hereafter enumerated.

2. Every candidate for the degree of Bachelor of Arts with Honours shall be required to present himself for examination at 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. This examination shall ordinarily be held in June of each year.<sup>1</sup>

3. Candidates for the degree of Bachelor of Arts with Honours may present themselves for examination in any of the following Honours Schools on furnishing certificates of

<sup>1</sup> In 1907 it will begin on Monday, June 10. The latest day for entry will be May 1.

# Degrees in Arts

having pursued, to the satisfaction of the Senate, the courses required for such Honours Schools in the University, viz. :

Classics

English Language and Literature Modern Languages and Literatures History Philosophy Economic and Political Science.

4. Candidates who have passed the Final examination for an Ordinary degree of Bachelor of Arts may, with the sanction of the Senate and on furnishing certificates of having attended, during the academic year following such Final examination for the Ordinary degree, the third year's, or, during the two academical years following such Final examination, the second and third years' courses approved by the University for any one of its Honours Schools, present themselves for examination for the degree of Bachelor of Arts with Honours in such School.

5. No candidate for a degree of Bachelor of Arts with Honours shall be admitted more than once to examination in the same Honours School; but students who have passed the Final examination in any of the Honours Schools may be admitted to the Final examination in any other Honours School after the expiration of one or two years, on presenting certificates of having attended, during the period in question, courses approved by the University.

Provided that in the said other Honours School selected, candidates shall not present themselves for the Final examination more than two academic years after the Final examination in Honours already passed by them, and also that no candidate be admitted to examination in any Honours School after a longer period than five years has elapsed since the date of his first entrance upon a prescribed course of study for an Honours School.

6. Names of candidates who have passed the examination for the degree of Bachelor of Arts with Honours shall be published in such form as to distinguish the Honours School in which severally they may have passed; the names of those who have passed in Honours being drawn up in three classes, and each class being arranged in alphabetical order 7. Candidates who have not acquitted themselves so as to deserve Honours may be excused the whole or such part of the examinations for the Ordinary degree as the joint examination committee may determine.

### Classics

Candidates for the degree of Bachelor of Arts with Regulations. Honours in Classics shall be required to pursue courses of study and to submit themselves for examination in the following subjects:

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 connected with Greek or Latin literature

Attendance in the subjects of the school shall be required as follows: Not less than twelve hours a week in the first and second years, and ten hours a week in the third year. Attendance on the full course for the Intermediate examination for the Ordinary degree of Bachelor of Arts may be accepted as the required attendance for the first year of the Honours course, provided that the subjects chosen by the candidate are substantially and to the satisfaction of the Board of the Faculty of Arts those required for the first year's course of the Honours School of Classics.

### Examination

Greek Prose Composition, one paper.

Latin Prose Composition, one paper.

Greek Unprepared Translation, one paper.

Latin Unprepared Translation, one paper.

- Translation from prescribed Greek books, with questions on grammar and subject matter, two papers.
- Translation from prescribed Latin books, with questions on grammar and subject matter, two papers.

Critical and Essay paper.

Two of the following :

Ancient History, one paper.

Ancient Philosophy, one paper.

Special subject in Greek or Latin Literature, one paper.

Greek and Latin Verse Composition, one paper (optional).

### Prescribed Books for 1907 :

- GREEK: Homer, Iliad xxii, xxiii, xxiv, Odyssey ix, x, xi, xii; Aeschylus, Persæ, \*Eumenides; Sophocles, Ajax, \*Antigone; Euripides, Bacchae, Hercules Furens; Aristophanes, Clouds, \*Frogs; Herodotus ii, \*vi; Thucydides vi, \*vii; Plato, Republic i, ii, iii, iv; Demosthenes, \*De Corona; Dionysius Halicarnassensis, De Compositione Verborum.
- LATIN : Plautus, \**Captivi, Trinummus*; Catullus (Palmer's selection); Lucretius iii, v; Virgil, *Georgics, Aeneid*, i, \*ii, iii, iv; Horace, Odes i, ii, \*iii, iv and Satires; Livy xxi, xxii; Cicero, pro Roscio Amerino, \*Second Philippic, Letters (Watson's selection, part v); Tacitus, Annals \*i, ii, Agricola; Juvenal, Satires \*i, \*iii, iv, v, \*x, xi, xiv.

# English Language and Literature

In this School there shall be alternative schemes of study: Scheme A, in which special attention will be paid to language; and Scheme B, in which special attention will be paid to literature. Under both schemes a competent knowledge of one classical and of at least one modern language shall be required for the attainment of high Honours.

Honours students, under either scheme, will, as a rule, be expected to take the Intermediate B.A. examination at the end of their first year, including the English Language as one of their subjects.

Candidates who have not taken English Language in their Intermediate examination may be permitted to enter for the Honours examination at the end of their third year, on condition that (i) they take Scheme B; (ii) that, before entering on their second year course, they satisfy the head of the Department that they possess a sufficient knowledge of the English Language to enable them to profit by the subsequent courses in that subject.

# Scheme A

Candidates shall be required to attend the following courses in the subjects of the School: during three academic years courses in English Language, including the

<sup>\*</sup>The books marked with an asterisk are to be studied with special care in all their bearings, textual, grammatical, literary, historical, etc.

History of the Language, Early English prose and verse, and Gothic, such courses amounting to not less than three hours a week for the first year and not less than four hours a week for the second and third years.

Candidates shall be also required

(1) either (a) to attend approved courses in two of the following languages: Old Icelandic, Old High German, Old French; or (b) to present a dissertation in a subject approved by the Board of the Faculty of Arts;

(2) to attend for two years approved courses of two hours a week in History, English *or* European; for two years approved courses in French *or* German; and for a third year an approved course in the History of the French Language and Literature, *or* in the History of the German Language and Literature. They are further required to attend, during the first year, an approved course in Latin *or* Greek.

#### Examination

Essay, one paper.

Translation of unseen passages of Old and Middle English, with literary and linguistic questions, one paper.

Prescribed books in Old and Middle English, with literary and linguistic questions, one paper.

Outlines of English Literature, with prescribed books, one paper. Grammar of Old and Middle English dialects, with illustrative passages for translation or comment, two papers.

History of English, with reference to general principles of linguistic development, one paper.

Gothic, one paper.

*Either* two of the following : Old Icelandic, one paper ; Old High German, one paper ; Old French, one paper ; *or* a dissertation on a subject approved by the Board of the Faculty of Arts.

Oral examination.

Prescribed Books in Old and Middle English for 1907:

Sweet's Reader, Extracts i, ii, iv, v, viii, ix, x, xiv a, xv, xvii; Exodus; Beowulf, vv. 2223 to end; Ancren Riwle (Sweet's Extracts); Chaucer, Clerk's Tale; Sir Gawayne and the Green Knight.

# Scheme B

Candidates shall be required to attend the following courses in the subjects of the School: in the first year, three hours a week in English Literature, and three hours a week in English Language; in the second year, five hours a week in English Literature, and two hours a week in English Language; in the third year, five hours a week in English Literature, and one hour a week in English Language.

Candidates shall be also required to attend, during the first and second years, approved courses in subjects other than English Language and Literature; such courses shall include an approved course in Latin or Greek, and shall average not less than five hours a week in the first year and not less than three hours a week in the second year; and during the third year, a course of two hours a week in some language other than English.

#### Examination

Essay, one paper.

Translation of unseen passages of Old and Middle English, with literary and linguistic questions, one paper.

Prescribed books in Old and Middle English, with literary and linguistic questions, one paper.

Outlines of English Literature, one paper.

Special period of English Literature, with prescribed books, two papers.

An English author, or selected subject from English Literature, two papers.

History of Criticism, one paper.

Oral examination.

In addition, candidates shall be required to present a dissertation on a subject approved by the Board of the Faculty of Arts.

Books and Periods prescribed for 1907:

Old and Middle English : As in Scheme A.

Special period : 1637-1700.

Books in special period: Palgrave's Golden Treasury, book ii; Palgrave's Treasury of Sacred Song; Cavatier and Courtier Lyrics (Canterbury Poets); Milton, Early Poems, Paradise Lost, Samson Agonistes, Areopagitica; Sir Thomas Browne, Religio Medici; Earle, Microcosmographie; Herrick, Denham and Waller, Poems; Marvell, Poems (not including Satires); Cowley, Essays; Dryden, Absalom and Achitophel, part i, Macflecknee, Hind and Panther, Conquest of Granada, All for Love, Essay of Dramatic Poetry, Preface to Fables; Otway, Venice Preserved; Congreve, The Way of the World, The Rehearsal; Bunyan, Grace Abounding; Locke, On Civil Government; Pepys, Diary (to end of year 1665); Taylor, Liberty of Prophesying; Butler, Hudibras, book i.

Special author: Shakespeare, with special study of Merchant of Venice, Richard II, Hamlet, Tempest.

# Modern Languages

The languages studied in the School shall be French, German, English.

Candidates for the degree of Bachelor of Arts with Honours in the School of Modern Languages shall be required to pursue courses of study and to submit themselves for examination in the following subjects :

*Either* (a) French and German, as principal subjects;

- or (b) French, as principal subject, together with German and English as subsidiary subjects;
- or (c) German, as principal subject, together with French and English as subsidiary subjects.

Candidates who enter the School in 1905, 1906 or 1907 may take English as a principal subject, with either French or German as a second principal subject.

Candidates shall also be required to study auxiliary subjects, of which Latin shall ordinarily form part. Exemptions may be granted to specially qualified candidates.

The names of candidates, who, being placed in the First or Second Class, have shown conspicuous merit in a principal subject or principal subjects, shall be distinguished in the class list by some mark to indicate the subject or subjects in which they have shown such merit.

# Principal subjects

# I. FRENCH AND GERMAN :

The course of study and subjects of examination in French or German taken as a principal subject shall be: Prescribed texts of before 1500, studied from a literary and linguistic standpoint; prescribed texts of after 1500, studied in the same way; unprepared translation; literature (outlines and special periods); the history of the language (including phonetics, versification, &c.); composition.

Candidates taking French or German as a principal subject shall be required to attend for at least two years classes in composition, translation and phonetics; for one hour a week for each of three years a class in Literature; for three hours a week for two years, and at least two hours a week for one of the three years classes on the history of the language, and the linguistic and literary study of texts prior to 1500; for one hour a week for one year a class in French or German Institutions.

II. ENGLISH :

The courses of study and subjects of examination in English taken as a principal subject by candidates entering the School in 1905, 1906 or 1907 are as follows:

Language. During the first year, a course on the History of the Language of not less than two hours a week, and a course of translation of not less than one hour a week. During the second year, a course of translation of not less than two hours a week, and a course of Gothic, or of French (if not attended under I), of not less than one hour a week. During the third year, a course of translation of not less than two hours a week, and an advanced course of not less than one hour a week.

*Literature.* During one year, a course of instruction in English Literature, averaging not less than three hours a week. During two other years, courses of instruction in English Literature, together amounting to an average of not less than four hours a week.

# Subsidiary subjects

I. FRENCH OR GERMAN:

The course of study and subjects of examination in French or German taken as a subsidiary subject shall be: The work required for the full course in French or German for the Ordinary degree of B.A.; additional modern texts; additional study of literature for one year.

Candidates taking French or German as a subsidiary subject shall be required to attend : for three years the full course in French or German for the Ordinary degree of B.A.; for one hour a week for one year an additional class in literature; for one hour a week for one year a class in French or German Institutions.

# II. ENGLISH :

The courses of study and subjects of examination in English taken as a subsidiary subject shall be: English Language: prescribed books in Old and Middle English; with elements of Old and Middle English Phonology. English Literature: the outlines with prescribed books, and a special period with prescribed books.

Candidates taking English as a subsidiary subject shall be required to attend : courses in Old and Middle English of one hour a week for three years ; courses in English Literature of three hours a week in the first and third years, and of four hours a week in the second year.

#### Examination

The examination in each subject of the School shall consist of an oral examination and of the following papers :

### FRENCH OR GERMAN AS A PRINCIPAL SUBJECT :

Composition and Essay, one paper.

Unprepared Translation, one paper.

- Prescribed Texts of before 1500, with literary and linguistic questions, one paper.
- Prescribed Texts of after 1500, with literary and linguistic questions, one paper.

Literature, one paper.

Grammar : History of the language and versification, one paper.

ENGLISH AS A PRINCIPAL SUBJECT :

- Translation of unseen passages of English, and of passages from Gothic and Old French, with questions suggested by the passages, two papers.
- Translation from prescribed English books, with questions suggested by the passages, one paper.

A period of literature, one paper.

Essays and questions (literature), one paper.

History of the language and historical grammar, one paper.

FRENCH OR GERMAN AS A SUBSIDIARY SUBJECT :

Prescribed texts, unprepared translation and composition, and historical grammar, two papers.

Literature, one paper.

# ENGLISH AS A SUBSIDIARY SUBJECT :

Old and Middle English, one paper, English Literature, two papers. Books and periods prescribed for 1907:

- I. FRENCH:
  - Books before 1500: E. Koschwitz, Les plus Anciens Monuments de la Langue Française (Serments, Eulalie, St. Leger); Vie de St. Alexis, ed. Paris; Aucassin et Nicolette, ed. Suchier, trans. Counson; Barsch, Chrestomathie, pp. 390-411, 462-495.
  - Books after 1500: Darmesteter et Hatzfeld, Morceaux choisis des Ecrivains du 16<sup>e</sup> siècle (both prose and verse); Descartes, Discours de la Méthode; Corneille, Le Cid, Polyeucte; Racine, Athalie; Molière, Le Misanthrope; Victor Hugo, Préface de Cromwell, Hernani, Notre Dame; Lamartine, Les Premières Médilations.
  - Periods of literature : Le Theatre en France au 17e siecle ; Le Roman français de 1820 a 1850.
- II. GERMAN:
  - Books before 1500: Braune, Althochdeutsches Lesebuch ii, iv, vi-viii, xii, xiv, xv, xvi (1-8), xvii, xxiii (1-5), xxiv, xxviii-xxxi, xxxii, (1-4), xxxiv, xxxvi, xli; Nibelungenlied Av. i-xii; Gott/ried von Strassburg I, Ii, viii; Bartsch, Liederdichter, xxi.
  - Books after 1500: Luther, vol. i (selection, ed. Neubauer, Halle) nos. 3 and 10; Goethe, Faust, part i, Egmont; Schiller, Wallenstein's Lager, die Piccolomini, Gedichte der dritten Periode (in Mayr, Schillers Gedichte, Wien); Lessing, Minna von Barnheim, Nathan der Weise, Hamburgische Dramaturgie (ed. Lyon, Velhagen and Klasing); Grillparzer, Sappho.

Period of literature : Die zweite klassische Periode.

- III. ENGLISH:
  - OLD ENGLISH: Beowulf, 1888 to end; Andreas; Battle of Maldon; Sweet, Reader, xxx-xxxiv (dialect pieces); The Anglo-Saxon Chronicle (Laud MS.).
  - MIDDLE ENGLISH: Morris and Skeat, Specimens of Early English, the following pieces: Cursor Mundi; Barbour, Bruce; Ormulum; Genesis and Exodus; Chaucer, Man of Lawes Tale; Psalter; Ancren Riwle; Owl and Nightingale; Ayenbile of Inwit.

#### History

Candidates for the degree of Bachelor of Arts with Honours in History shall be required to take the Intermediate examination for the Ordinary degree at the end of the first year of academic study, Latin and History being two of the subjects.

Attendance in the subjects of the School shall be required for ten hours a week in the second academic year, and eight hours a week in the third.

Candidates shall also be required to attend a course in one modern language during their second or third year.

150

#### Examination

Essay, one paper.

English (including Constitutional) History, two papers.

Outlines of European History, two papers.

Special period, studied in connection with the original authorities, two papers.

Economics and Economic History, one paper.

Political Theory, one paper.

- In addition, candidates shall be required to present a dissertation on some subject approved by the Board of the Faculty of Arts.
- Candidates shall also be required to show in the examination some knowledge of at least one foreign language (ancient or modern).

Special periods for 1907: (1) Roman History, 31 B.C.-180 A.D.; (2) European History, 1789-1804 A.D.

#### Philosophy

Candidates for the degree of Bachelor of Arts with Honours in Philosophy shall be required to pursue the following courses of study, and to submit themselves to the following examinations :

The course of study for the first year is that for the Intermediate examination for the Ordinary degree of B.A. or B.Sc., Logic being one of the subjects, and candidates must pass this examination before proceeding further on their Honours course.

During the second and third years candidates shall be required to attend approved courses in Philosophy of not less than five hours a week in each year.

They shall also be required to attend, during the second and third years, approved courses of lectures on other subjects, the number of lectures amounting to not less than two hours a week in each year.

#### Examination

Essay, one paper. General Questions, one paper. Logic, Deductive and Inductive, one paper. Psychology, one paper. Ethics, one paper. Advanced Psychology *or* Moral and Political Philosophy, one paper. Degrees in Arts

- *Either* History of Ancient Philosophy, one paper, and two papers on *one* of the following :
  - Descartes, Malebranche, Spinoza.

Spinoza and Leibniz.

English Philosophy from Locke to Hume, with reference to Bacon and Hobbes and to Reid and the Scottish Philosophy.

Kant.

Or, History of Modern Philosophy, one paper, and two papers on *one* of the following :

Greek Philosophy before Socrates.

Socrates and Plato.

Aristotle.

Post-Aristotelian Philosophy.

#### Economic and Political Science

The details of this course will be arranged later.

## DEGREE OF MASTER OF ARTS<sup>1</sup>

Ι

1. The degree of Master of Arts may be conferred, on payment of the proper fee, upon registered Bachelors of Arts when of not less than three years' standing from the date of their graduation as Bachelors, subject to the conditions contained in the following paragraphs.<sup>2</sup>

2. Bachelors of Arts who have graduated with Honours may proceed to the degree of Master of Arts on presenting a dissertation satisfactory to the Senate on a subject approved by the Board of the Faculty of Arts.<sup>3</sup>

3. Bachelors of Arts who have obtained the Ordinary degree shall be required to pass an examination in a subject or group of subjects upon which instruction is given in the Faculty of Arts, and to present a dissertation satisfactory to the Senate on a subject approved by the Board of the Faculty of Arts, or, if they do not present a dissertation, to pass a more extended examination. Regulations shall

1 In 1907 the latest day of entry will be March 1st, and the examination held under I. 3 will begin on Monday, June 10th.

Ordinance

<sup>2</sup> See Ordinance XI, page 79.

<sup>3</sup> Students who have entered on an Honours course prior to October 1st, 1006, may obtain permission to proceed to the M.A. degree under the provisions of the Ordinance published in the Calendar for the session 1905-6.

determine the subjects and groups of subjects in which the examination will be held. Certificates of attendance on courses of study in the University shall not be required.

4. The names of candidates who have passed the examination for the degree of Master of Arts shall be arranged in alphabetical order without distinction of classes.

#### II

Graduates or persons who have passed the Final examination for a degree of other approved Universities shall, if they present evidence satisfactory to the Senate 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 M.A., without taking the B.A. degree, after not less than two years of such advanced study or research. Such candidates shall be required to give evidence to the Senate at the end of the first year of their period of study that their work has been satisfactory, and at the end of their second year they shall be required to present a dissertation, and to satisfy such further test, if any, as the Senate shall deem expedient.

## Examination

Bachelors of Arts who have obtained the Ordinary degree Regulations. and are candidates for the degree of Master of Arts may present themselves for examination *either* in *one* of the following subjects, viz., Greek, Latin, French, German, English Language and Literature, History, Philosophy, Economics, Education, *or* in *two* of the following : Greek, Latin, French, German, English Language and Literature, History, Philosophy, Economics. Candidates who offer two subjects must submit their scheme of study for approval by the Board of the Faculty of Arts.

#### Greek

. As a single subject.

Translation from Greek books selected from those prescribed for Honours in Classics, one paper.

Translation at sight and questions on the subject matter of the specified books, one paper.

Translation at sight and Greek prose composition, one paper.

A dissertation on some subject approved by the Board of the Faculty of Arts.

II. In combination with another subject.

As above, with the omission of the dissertation.

Books prescribed for 1907: Homer, *Iliad* xxiii, *Odyssey* ix, xi; Sophocles, *Antigone*; Euripides, *Bacchae*; Aristophanes, *Frogs*; Thucydides vii; Plato, *Republic* ii, iii; Demosthenes, *De Corona*.

#### Latin

I. As a single subject.

Translation from Latin books selected from those prescribed for Honours in Classics, one paper.

Translation at sight and questions on the subject matter of the specified books, one paper.

Translation at sight and Latin prose composition, one paper.

A dissertation on some subject approved by the Board of the Faculty of Arts.

II. In combination with another subject.

As above, with the omission of the dissertation.

Books prescribed for 1907: Plautus, *Captivi*; Horace, *Odes* i-iii and *Satires*; Virgil, *Aeneid* i-iv; Cicero, *Second Philippic*; Livy xxi; Tacitus, *Annals* i, *Agricola*; Juvenal i, iii, iv, x, xi, xiv.

#### French

I. As a single subject.

Composition and essay, one paper.

Prescribed texts in Old and Modern French, including literary and linguistic study, one paper.

Unprepared translation and historical grammar, one paper.

French Literature (general outlines and special period or periods), one paper.

Oral examination.

A dissertation on some subject approved by the Board of the Faculty of Arts.

II. In combination with another subject.

As above, with the omission of the dissertation.

Books prescribed for 1907: G. Paris et Langlois, Chrestomathie du Moyen Age; Darmesteter et Hatzfeld, Morceaux choisis des Ecrivains du 16<sup>6</sup> siècle (prose only); Corneille, Le Cid; Molière, Le Misanthrope; Voltaire, Siècle de Louis XIV, part iii; Victor Hugo, Hernani, Notre Dame.

Period of Literature for 1907 : The French Novel from 1820 to 1850.

### German

As a single subject.

Composition and essay, one paper.

Prescribed texts in Middle High German and New High German, including literary and linguistic study, one paper.

154

Unprepared translation and historical grammar, one paper.

German Literature (general outlines and special period or periods), one paper.

Oral examination.

A dissertation on some subject approved by the Board of the Faculty of Arts.

II. In combination with another subject.

As above with the omission of the dissertation.

Books prescribed for 1907 : Bartsch, Liederdichter xxi; Nibelungenlied, Av. i-xi; Luther (selection, ed. Neubauer, Halle), i, nos. 3 and 10; Schiller, Wallensteins Lager, Piccolomini, Gedichte der dritten Periode (in Mayr, Schillers Gedichte, Wien); Goethe, Faust, i, and Egmont; Lessing, Nathan der Weise.

Periods of Literature for 1907: Goethe's Life and Works; Schiller's Life and Works.

#### English Language and Literature

I. As a single subject.

Either

A dissertation.

Translation from prescribed books in Old and Middle English, and unseen translation, one paper.

Outlines of English Literature with prescribed books, two papers. Or

An essay, one paper.

Translation from prescribed books in Old and Middle English, and unseen translation, two papers.

Outlines of English Literature with prescribed books, two papers. *One* of the following :

- (a) Old and Middle English Dialects, one paper, with Gothic, one paper.
- or (b) Shakespeare, two papers.

II. In combination with another subject.

#### Either

An essay, one paper.

Translation from prescribed books in Old and Middle English, and unseen translation, two papers

Gothic, one paper.

#### Or

An essay, one paper.

Outlines of English Literature with prescribed books, two papers.

A special author or subject, one paper.

Books and periods prescribed for 1907:

#### I. As a single subject

- (a) For candidates specializing in Language: The Gothic Bible, The Epistles to the Romans and Corinthians; Reowulf, vv. 1-1651; Langland, Piers Plowman (Clarendon Press selections);
- (b) For candidates specializing in Literature : Beowulf, vv. 1-1651; Langland, Piers Plowman (Clarendon Press selections); Addison, Golden Treasury selections; Steele, Golden Treasury selections; Pope, Rape of the Lock, Iliad, Book 1, Episitle to Arbuthnot; Swift, Cadenus and Vanessa, Lines on the death of Dr. Swift, Gulliver's Travels, Drapier's Letters; Thomson, Winter; Johnson, Rasselas, Lives of Pope, Swift, and Gray; Gray, Poems; Collins, Poems; Sterne, Sentimenial Journey; Fielding, Joseph Andrews; Sheridan, The Rivals, The Critic; Walpole, Letters (1760-1780); Goldsmith, Poems, Vicar of Wakefield; Burke, Speeches on America and Letter to Sheriffs of Bristol.

Special period for candidates specializing in Literature : 1700-1785.

#### II. In combination with another subject

Beowulf, vv. 1-1651; Langland, Piers Plowman, (Clarendon Press selections); Addison, Golden Treasury selections; Steele, Golden Treasury selections; Pope, Rape of the Lock, Epistle to Arbuthnot; Swift, Gulliver's Travels, parts i and ii; Palgrave, Golden Treasury, book iii; Johnson, Lives of Pope and Swift; Fielding, Joseph Andrews; Burke, Speech on Conciliation with America.

#### Special period : 1700-1785.

#### History

I. As a single subject.

An essay, one paper.

- Either Ancient History (to 323 A.D.) General, two papers with special period in Ancient History, two papers.
- Or Mediæval History (300 to 1300 A.D.), General, two papers, with special period in Mediæval History, two papers.
- Or Modern History (since 1300 A.D.), General, two papers, with special Period in Modern History, two papers.

Candidates may substitute a dissertation for the essay and the two papers on the special period.

#### II. In combination with another subject.

- (a) Ancient or Mediæval or Modern History, one paper.
- (b) A special subject in the period taken under (a), two papers.
  - Candidates must in every case satisfy the Board of the Faculty of Arts that the subjects they offer under (a) and (b) form a suitable combination.
- Special periods for 1907: (1) Roman History, 79-44 B.C. (not to be taken after 1908); (2) Roman History, 31 B.C.-14 A.D.; (3)
  French History, 1226-1270 A.D.; (4) The Age of Henry VIII (not to be taken after 1908); (5) English History, 1760-1783 A.D.; (6) European History, 1789-1804 A.D.

#### Philosophy

As a single subject.

- (a) General Questions, one paper.
- (b) Three of the following :

Logic, one paper. Psychology, one paper. Ethics, one paper. History of Philosophy, Ancient or Modern, one paper. Advanced Psychology *or* Moral and Political Philosophy, one paper.

(c) One of the following special subjects, one paper.

Greek Philosophy before Socrates.

Socrates and Plato.

Aristotle.

Post-Aristotelian Philosophy.

Descartes, Malebranche, Spinoza.

Spinoza and Leibniz.

English Philosophy, from Locke to Hume, with reference to Bacon and Hobbes, and to Reid and the Scottish Philosophy.

Kant.

Candidates may as an alternative present a dissertation on a subject approved by the Board of the Faculty of Arts and present themselves for examination in three papers from section ( $\delta$ ) or in two papers from section ( $\delta$ ) and one paper from section (c).

#### II. In combination with another subject.

History of Philosophy, Ancient or Modern, one paper.

- Logic, or Ethics, or Psychology, or History of Philosophy, Modern or Ancient, one paper.
- A special subject, approved by the Board of the Faculty of Arts, one paper.

#### Economics

I. As a single subject.

- (a) An essay, one paper.
- (b) English Economic History, including the special study of a set period, two papers.
- (c) One of the following:

General Principles of Economics, two papers.

A special Economic subject, two papers.

History of Economic Theory, including the special study of the work of a particular economist, two papers.

Candidates who have taken Economics as a subject for the degree of B.A. may not offer General Principles of Economics.

Candidates may as an alternative present a dissertation on a subject approved by the Board of the Faculty of Arts, and present themselves for examination in (b) or in one subject of (c). Such candidates may not offer a special Economic subject and a dissertation on the same subject.

II. In combination with another subject.

English Economic History or History of Economic Theory, one paper.

A special Economic subject, two papers.

Special period for 1907 : 1603-1760.

Economist for special study for 1907 : John Stuart Mill.

### Education

(A) A dissertation on some subject related to Education and approved by the Board of the Faculty of Arts.

And (B) Either The Philosophy of Education, three papers, viz:

- Philosophy, Social Philosophy, and Ethics, as related to the aim and form of Education and the organisation of its means, one paper.
- The Physiology and Psychology of Development as related to the processes of Education, one paper. The Theory of Knowledge as related to the content and organisa-
- tion of Instruction, one paper.

Or The History of Education, three papers, viz:

- General History of the development of thought in relation to Education in Europe, with study of original authorities, two papers.
- One of the following in detail with study of original authorities, one paper.
- (a) From beginnings of Greek education to 300 A.D.
- (b) A.D. 300-1400.
- (c) A.D. 1400-1760.
- (d) A.D. 1760-present time.
- (e) General study of the educational systems of France, Germany, and the United States of America.
- (f) A more detailed study, based on personal knowledge, of the educational system of any one country, selected by the candidate with the approval of the Board of the Faculty of Arts. The examination on this subject may consist of an inspection of the reports and note books presented by the candidate.

#### DEGREE OF DOCTOR OF LETTERS<sup>1</sup>

Ordinance.

Registered Masters of Arts 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, shall be entitled to be admitted to the degree of Doctor of Letters at the expiration of not less than six years from the date of admission to the Bachelor's degree.<sup>2</sup>

158

<sup>1</sup> In 1907 the latest date for application will be March 1.

<sup>&</sup>lt;sup>2</sup> See Ordinance XI, page 79.

## Diplomas in Arts

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 examination as it may from time to time determine.

## DIPLOMAS IN ARTS

## General Regulations

### Applicable to all Diplomas

Diplomas shall be granted by the University, in such Ordinance 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.

Candidates for Diplomas are required to give satisfactory Regulations. attendance upon all the subjects which form part of their course of study, and to present themselves for the class examinations held in the same. Those who do not pass satisfactorily in these examinations 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.

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.

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.

## Diploma in Education

1. Candidates for the diploma in Education must be Regulations. graduates of some University in the United Kingdom, or must have obtained such other academic qualifications as shall be approved by the Senate of the University. The Senate will accept any qualification which is recognised by the Teachers' Registration Council as sufficient for the purpose of registration in Column B.

2. The course of study shall extend over at least one academic year, and shall consist of :

- (a) Attendance in schools approved by the University for the purpose,
- (b) Attendance upon courses of lectures in the Theory, Practice, and History of Education.

In the case of a student who has taken Honours in the Final examination for a degree after spending four academic years at some University in the United Kingdom, attendance for two consecutive terms will be accepted.

3. Such regular and continuous attendance in school shall be given throughout at least two terms as the Professor of Education may think desirable.

4. Satisfactory reports from (a) the head teacher of the school and (b) the University Education Department shall be presented before the candidate can enter for the examination.

5. Candidates shall attend prescribed courses of lectures at the University on the Theory, Practice, and History of Education.

(*Note.*— All such courses may be taken in one academic year, but it is strongly recommended that students already in the University should take the preparatory course in the Theory of Teaching in a year previous to that given to preparation for the diploma. These courses will, as a rule, be those arranged for the subject of Education for the degree of B.A., except that for lectures on the organisation, curriculum and special methods of teaching in primary schools will be substituted a corresponding course having more definite reference to secondary schools).

6. The examination for the diploma shall take place in June, at the same time as the degree examinations, and shall consist of written papers and tests in practical skill. The written papers—except that in the Practice of Education—will, as a rule, be the same as those set in the degree examination.

The tests in practical skill shall consist in the delivery of lessons and an inspection of records of the candidate's practical work in school. Importance shall be attached to reports on the candidate's work and skill from the head teacher of the school and from a member of the staff of the University Education Department.

7. Graduates in Arts or Science of this University who have included Education in the Final examination for their degree may obtain the diploma in Education after a further year's attendance on a course approved by the Board of the Faculty in which the degree was taken. Such course must include :

- (a) Attendance in schools as specified in 2 (a) above;
- (b) Attendance on a course of lectures on the practical work of secondary schools;
- (c) Attendance on a course of study in Arts or Science approved by the Board of the Faculty as at least equivalent to the subject of Education taken as part of the Final course for the degree.

The examination for the diploma in Education will in these cases consist of the tests of practical skill, and the paper in the Practice of Education (s. 6).

The diploma in Education will not be issued until the candidate has also passed the degree examination in the subject or subjects included under (c).

8. The list of successful candidates shall be issued in alphabetical order, and no special honours shall be assigned to any candidate.

9. No diploma shall be issued until the candidate has passed in both the written and the practical parts of the examination. But a candidate who fails in the practical part only may, on the recommendation of the Examiners, be allowed by the Senate to present that part at a subsequent date without further written examination. In such cases the candidate must produce a satisfactory report from the head teacher of the school in which he (or she) has been teaching, and must submit records of work done.

10. Students taking the whole of the course for the diploma, whether in one or in two years, shall pay an inclusive fee of  $\pounds$ 14 14s. The fee for the examination shall be  $\pounds$ 2.

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## Diplomas in Arts

# Diploma for Teachers of French<sup>1</sup>

Candidates for this diploma will be required to have passed prescribed examinations, after pursuing a prescribed course of study.

The examinations for the diploma, to be conducted annually, will be:

- The First examination, in language, of the same standard as the Final examination in French for the Ordinary degree of B.A., except that there will be no examination in literature or in prescribed authors.
- 2. The Second examination, in methods of teaching and in phonetics.

Candidates for the diploma will be required

- (1) To pass the First examination, or to give satisfactory evidence that their knowledge of the French language is not below the standard of that examination.
- (2) To attend for at least one year the University class preparatory to the Second examination.
- (3) To pass the Second examination.

# Diploma for Teachers of German<sup>2</sup>

The regulations for this diploma are the same as above, with the substitution of "German" for "French" throughout.

1 See page 171. 2 See page 174.

## Courses in Arts

## CLASSICS

## Professor Rhys Roberts Professor Connal Mr. Greenwood

## GREEK LANGUAGE AND LITERATURE

## I. Elementary Class

This class will be for beginners; it will not be held unless there is a reasonable number of entries.

Saturdays at 9.30 a.m.

Fee for the session,  $\pounds_{I}$  is.; for a term, 7s. 6d.

#### Books recommended

Rouse's Greek Book for Beginners and First Greek Reader (Blackie).

Sonnenschein's Greek Grammar (Swan Sonnenschein).

#### **II. Matriculation Course**

The work in this course will comprise grammar, elementary composition, translation at sight, and the special study of Thucydides vi. 30-53 and 60-105 and Homer, *Odyssey* xxiii, xxiv.

Mondays, Wednesdays, and Fridays at 11.30 a.m., and a class in composition on one other hour a week at a time to be fixed.

Fee for the course: without the class in composition,  $\pounds_3$  13s. 6d.; for the composition class,  $\pounds_1$  5s.

Books recommended

Thucydides vi, Marchant (Macmillan) or Spratt (Cambridge Press). Homer, Odyssey xiii-xxiv, Merry (Oxford Press).

#### III. Intermediate Course

The work in this course will comprise composition, translation at sight and the special study of Xenophon, *Memorabilia* i, and Aristophanes, *Clouds*.

Mondays, Wednesdays and Fridays at 3 p.m., and a composition class on one other hour a week at a time to be fixed.

Fee for the course: without the class in composition  $\pounds_3$  13s. 6d.; for the composition class,  $\pounds_1$  5s.

Books recommended

Jebb, *Primer of Greek Literature* (Macmillan). Xenophon, *Memorabilia* i, Edwards (Cambridge Press). Aristophanes, *Clouds*, Merry (Oxford Press).

## Courses in Arts

### IV. Final Course (First Year)

The work in this course will comprise composition, translation at sight, and the special study of books to be selected when the class meets.

Mondays at 3 p.m., Tuesdays at 9.30 a.m., and Fridays at 10.30 a.m. Composition class on Fridays at 3 p.m.

Fee for the course: without the class in composition,  $\pounds_3$  135. 6d.; for the composition class,  $\pounds_1$  5s.

#### Books recommended

Murray's, Jevons's, or Mahaffy's *History of Greek Literature*. Sidgwick's *Greek Prose Composition* (Rivington).

## V. Final Course (Second Year)

The work in this course will comprise composition, translation at sight, and special study of Demosthenes, *De Corona* and Homer, *Iliad* i and vi, *Odyssey* ix and xi.

Mondays, Wednesdays and Fridays, at 9.30 a.m., and a composition class on one other hour a week at a time to be fixed.

Fee for the course: without the class in composition,  $\pounds_3$  135. 6d.; for the composition class,  $\pounds_1$  5s.

#### Books recommended

Murray's, Jevons's, or Mahaffy's History of Greek Literature.

Autenrieth, Homeric Dictionary (Macmillan).

Jebb, Introduction to Homer (Maclehose).

Butcher, Demosthenes (Macmillan).

Homer, Iliad i-xii, Monro (Oxford Press).

Homer, Odyssey i-xii, Merry (Oxford Press).

Demosthenes, De Corona, Goodwin's larger or smaller edition (Cambridge Press).

#### VI. M.A. and Honours Course

The work in this course will comprise composition, translation at sight, and the study of books prescribed for the examinations for Honours in Classics, and for the M.A. in Greek (see pages 143 and 153).

Mondays, Tuesdays, Wednesdays, and Thursdays, at 10.30 a.m., on Saturdays at 11.30 a.m. (composition), and at one other hour to be fixed by arrangement.

Fee for the course: without the class in composition  $\pounds_{5}$  15s. 6d.; for the composition class,  $\pounds_{1}$  5s.

### Latin

## LATIN LANGUAGE AND LITERATURE

### I. Matriculation Course

The work in this course will comprise grammar, elementary composition, translation at sight, and the special study of Caesar, *de Bello Gallico* vii. 1-54, and Virgil, *Aeneid* xi.

Mondays, Wednesdays and Fridays at 10.30 a.m., and Thursdays at 11.30 a.m. (composition). A special class in grammar will be held on Tuesdays at 2 p.m.

Fee for the course : without the classes in composition and grammar,  $\pounds_3$  135. 6d.; for the composition and grammar classes,  $\pounds_1$  55. each.

#### Books recommended

Caesar, de Bello Gallico vii, Brown (Blackie). Virgil, Aeneid xi, Sidgwick (Pitt Press), or Page (Macmillan).

### II. Intermediate Course

The work in this course will comprise composition, translation at sight, and the special study of Cicero, *in Caecilium* and *in Verrem* i, and Virgil *Aeneid* i and ii.

Mondays, Wednesdays and Fridays at 9.30 a.m., and Tuesdays at 10.30 a.m. (composition).

Fee for the course: without the class in composition,  $\pounds_3$  13s. 6d.; for the composition class,  $\pounds_1$  5s.

#### Books recommended

Cicero, in Caecilium and in Verrem i (Clarendon Press). Virgil, Aeneid i, ii, Page (Macmillan).

#### III. Final Course (First Year)

The work in this course will comprise composition, translation at sight, and the special study of selected books, two of which will be Livy ii and Horace, *Odes* ii and iii.

Mondays, Wednesdays, and Fridays, at 11.30 a.m., and Tuesdays, at 11.30 a.m. (composition).

Fee for the course: without the class in composition,  $\pounds_3$  13s. 6d.; for the composition class,  $\pounds_1$  5s.

Books recommended Livy ii, Conway (Pitt Press). Horace, Odes, Page (Macmillan).

## Courses in Arts

#### IV. Final Course (Second Year)

The work in this course will comprise more advanced composition, translation at sight, and the special study of Tacitus, *Annals* i, and Horace, *Satires*.

Mondays, Wednesdays and Fridays at 4 p.m., and Tuesdays at 11.30 a.m. (composition).

Fee for the course: without the class in composition,  $\pounds_3$  135. 6d.; for the composition class,  $\pounds_1$  55.

#### Books recommended

Tacitus, Annals i, Furneaux (Clarendon Press). Horace, Satires i, ii, Gow (Pitt Press).

### V. M.A. and Honours Course

For students reading for the M.A. or Honours examination.

Tuesdays, Thursdays, and Saturdays at 9.30 a.m., and Saturdays at 10.30 a.m. (composition).

Fee for the course : without the class in composition,  $\pounds_{,3}$  135. 6d. ; for the composition class,  $\pounds_{,1}$  55.

#### Books recommended for Classical Students.

Such books as the following will be found useful by classical students:

Murray's Ancient Greek Literature, Jevons's Greek Literature, Mahaffy's Greek Classical Literature, Mackail's Latin Literature, Cruttwell's History of Roman Literature.

- Sandys' History of Classical Scholarship, Saintsbury's History of Criticism, Evelyn Abbott's Hellenica, Butcher's Aspects of the Greek Genius and Harvard Lectures on Greek Subjects, Dickinson's Greek View of Life, Whibley's Companion to Greek Studies, Greenidge's Roman Public Life.
- Jebb's Growth and Influence of Classical Greek Poetry, Symonds' Studies of the Greek Poets, Butcher's Aristotle's Theory of Poetry and the Fine Arts, Jebb's Introduction to Homer, Browne's Homeric Study, Haigh's Attic Theatre and Tragic Drama of the Greeks, Decharme's Euripide et l'esprit de son Théâtre, Jebb's Attic Orators.
- Tyrrell's Latin Poetry, Sellar's Roman Poets of the Republic and Roman Poets of the Augustan Age (Virgil, Horace), Glover's Studies in Virgil, Martha's Poeme de Lucrece, Boissier's Ciceron et ses amis.
- Giles's Comparative Philology, V. Henry's Comparative Grammar of Greek and Latin, Goodwin's Greek Moods and Tenses, Gildersleeve's Greek Syntax, Monro's Homeric Grammar, the Latin Grammars of Roby, Madvig, Gildersleeve, and Lodge, Sidgwick's Lectures on Greek Prose Composition.

## English

# ENGLISH LANGUAGE & LITERATURE

## Professor VAUGHAN

## Dr. MOORMAN

#### I. Matriculation Course (Literature)

The work in this course will include the study of English essay writing and of the following works: Shakespeare, *Midsummer Night's Dream*; Addison and Steele, *Coverley Papers*; Byron, *Childe Harold*, cantos iii and iv.

Tuesdays at 11.30 a.m. throughout the session, and Thursdays at 2 p.m. in the second and third terms.

Fee for the course,  $\pounds_2$  5s.

#### II. Intermediate Course (Literature)

The work in this course will comprise the history of English literature from 1700 to 1765, and the special study of Palgrave, Golden Treasury, book iii; Addison, Golden Treasury selections; Swift, Gulliver's Travels; Johnson, Lives of Pope and Swift; Pope, Essay on Man, book i, Epistle to Arbuthnot; Shakespeare, Henry IV., Part I; Chaucer, Prologue to Canterbury Tales.

Mondays, Wednesdays and Fridays at 10.30 a.m. throughout the session.

Fee for the course,  $\pounds_3$  13s. 6d.

#### III. Intermediate and First Year Honours Course (Language)

The work in this course will comprise the history of the English Language and the special study of Sweet, Anglo-Saxon Primer; Anglo-Saxon Chronicle (reigns of Alfred and Edward the Elder); Morris, Specimens of Early English, vol. i, extracts 10, 18; Chaucer, Prologue to Canterbury Tales.

Three hours a week, at times to be arranged.

Fee for the course,  $\pounds_3$  13s. 6d.

#### IV. Final Course

Students taking English in the Final course may offer English Literature and Language as a principal subject, or English Literature alone as a subsidiary subject (see p. 137).

The courses will be as follows :

## Courses in Arts

### a. English Literature

The work in this course will comprise the History of English Literature from 1700 to 1784 and the special study of Palgrave, Golden Treasury, Book iii; Steele, Golden Treasury selections; Swift, Gulliver's Travels (Voyages to Lilliput and Brobdingnag); Pope, Epistle to Arbuthnot, Iliad, Book i; Johnson, Lives of Pope and Gray; Burke, Speech on Conciliation with America; Shakespeare, King Lear; Chaucer, Pardoner's Tale with Prologue to it.

Mondays, Wednesdays and Fridays, at 10.30 a.m., throughout the session.

Fee for the course, £3 135. 6d.

## b. English Literature and Language

The work in this course will comprise, in addition to what is entered under (a), (1) for students in the first year of their Final course, a study of the Elements of Old and Middle English, Sweet, Anglo-Saxon Primer, Chaucer, Pardoner's Tale with the Prologue to it; (2) for students in the second year of their Final course, Sweet, Anglo-Saxon Reader, extracts vi, vii, viii, xxvi; Ancren Riwle (Sweet's extracts); Chaucer, Knight's Tale.

One hour a week throughout the session.

Fee for the course, £1 115. 6d.

## V. Honours Course, Second Year (Literature)

This course will be devoted to the study of the Outlines of English Literature.

One hour a week at a time to be arranged. Fee for the course,  $f_{,1}$  115. 6d.

### VI. and VII. Honours Courses, Second and Third Years (Literature)

These courses will be devoted to the study (1) of the History of Literary Criticism; (2) of the period 1637-1700.

One hour a week for each of these courses, at a time to be arranged.

Fee for each of these courses, £1 115. 6d.

#### VIII. Honours and M.A. Course (Language)

Honours students in their second year attend this course for two hours a week, Honours students in their third year attend for one hour a week.

Translation from Old and Middle English texts, as prescribed for the Honours School (see page 145).

Fee for two hours a week,  $\pounds z$  128. 6d.; for one hour,  $\pounds 1$  118. 6d.

#### IX. Post-Graduate Course

A special course, mainly intended for post-graduate students, will be delivered on the Literary Relations between England and France in the seventeenth century.

One hour a week during the first two terms, at a time to be arranged.

Fee for the course,  $\pm$ , 1 1s.

### Evening Course

See page 339.

## FRENCH LANGUAGE AND LITERATURE

Professor Barbier Dr. Rudmose-Brown

#### I. Matriculation Course

The work in this class will comprise grammar, elementary composition, translation at sight, conversation in French, and the study of special books.

Mondays, Wednesdays and Fridays, at 3 p.m. Fee for the session,  $\pounds_3$  138. 6d.

#### Books recommended

Edmond About, Le Roi des Montagnes (Pitt Press). Molière, Le Bourgeois Gentilhomme (Macmillan).

#### II, III. Intermediate Courses

The work done in these two courses is the same in every respect. It will comprise grammar, composition, dictation, translation at sight, conversation in French, and the special study of Voltaire, *Lettres Choisies*; André Chénier, *Extraits*; Balzac, *Une Ténébreuse Affaire*. Course II will be held on Mondays, Wednesdays and Fridays at 11.30 a.m., Course III at 4 p.m. on the same days.

Fee for either course,  $\pounds_3$  13s. 6d.

Books recommended Voltaire, Lettres Choisies (Hachette). André Chénier, Extraits (Hachette). Balzac, Une Ténébreuse Affaire.

#### IV. Final Course

The work in this course will comprise more advanced syntax and composition, translation at sight, the elements of historical grammar and phonetics, and the special study of Victor Hugo, *Notre Dame*.

Mondays, Wednesdays and Fridays, at 2 p.m. Fee for the session,  $\pounds_3$  135. 6d.

Books recommended Victor Hugo, Notre Dame (Clarendon Press). Gasc, French Prose Composition (Bell).

### V. French Literature

Lectures on *Le Roman en France de 1820 à 1850* will be given in French on Tuesdays at 3 p.m., during the first and second terms.

Fee,  $\pounds_{I}$  IS. No entry will be taken for less than two terms.

## VI. French Literature Revision Class

Tuesdays at 3 p.m. during the third term.

Students reading for the Final B.A. and Honours are expected to join this class.

Fee, 105. 6d.

#### Books recommended

Doumic, Histoire de la Littérature Française (Delaplane, 3s. 4d.) Lanson, Histoire de la Littérature Française.

### VII. Honours Course

Mondays, Wednesdays and Fridays, at 4 p.m. Fee for the session : two hours,  $\pounds_2$  12s. 6d. ; three hours,  $\pounds_3$  13s. 6d.

## VIII. Commercial Course.

Two hours a week at times to be arranged.

In addition to the study of French correspondence, etc., a book bearing on French commercial life will be read.

Fee, £, 2 125. 6d.

#### IX. Saturday Morning Training Course (A)

This class will meet on Saturdays, from 10.15 a.m. to 12.15 p.m., beginning October 6. (N.B. The hours may be slightly altered to meet the convenience of students living outside Leeds.)

The course will cover the work in language required for the First examination in connection with the University diploma for teachers of French (see p. 162), but students who are not candidates for the diploma will also be admitted on satisfying the Professor that they are sufficiently qualified.

Fee for the course,  $\pounds_2$  125. 6d.

## X. Saturday Morning Training Course (B)

This class will meet on Saturdays, from 10.15 a.m. to 12.15 p.m., beginning October 6. (N.B. The hours may be slightly altered to meet the convenience of students living outside Leeds.)

The course will cover the work in phonetics and methods of teaching required for the Second examination in connection with the University diploma for teachers of French (see p. 162), but students who are not candidates for the diploma will also be admitted on satisfying the Professor that they are sufficiently qualified.

Fee for the course,  $\pounds$ , 2 12s. 6d.

# GERMAN LANGUAGE AND LITERATURE

### Professor SCHUDDEKOPF

## Mr. Gough

The German courses have been so arranged as to be applicable to (a) candidates for University and other examinations; (b) students of modern literature; (c) general students and students of science; (d) commercial students.

The Professor will be pleased to direct students as to what courses will best suit them.

### I. Elementary Course

Mondays, Wednesdays and Fridays, at 2 p.m.

This class is intended for beginners. Special attention will be given to students of science.

Fee for the course,  $f_{3135}$ . 6d.

#### Books recommended

Kuno Meyer, German Grammar, part i (Sonnenschein). Sonnenschein, First German Reader and Writer (Sonnenschein). Fiedler-Sandbach, First German Course for Science Students (Moring).

Chalmers, Gedichte zum Auswendiglernen (Harrap).

#### II. Matriculation Course

Mondays, Wednesdays and Fridays, at 4 p.m.

This course is intended for students who already possess an elementary knowledge of German. In addition to the study of grammar and composition, the books set for the Matriculation examination will be read; but instead of these, students of science will have the option of reading German prose bearing on various branches of science. German conversation will be practised.

Fee for the course,  $f_{3135.6d}$ .

#### Books recommended

Kuno Meyer, German Grammar, parts i and ii (Sonnenschein). Second German Reader and Writer (Sonnenschein). Schrader, Friedrich der Grosse (Macmillan). Schiller, Lied von der Glocke, ed. Chamberlin (Heath). Dippold, Scientific German Reader (Ginn).

### III. Intermediate Course

Mondays, Wednesdays and Fridays, at 3 p.m.

This course is suitable for candidates entering for the Intermediate examination, for commercial students, and for general students who wish to acquire a greater proficiency in German. In addition to the prescribed work, syntax, dictation, composition, and unprepared translation will be studied, and the class will have considerable practice in German conversation.

Fee for the course,  $f_{3}$  13s. 6d.

#### Books recommended

Kuno Meyer, German Grammar, parts i and ii (Sonnenschein). Third German Reader and Writer (Sonnenschein). Freytag, Soll und Haben, ed. Files (Heath). Goethe, Hermann und Dorothea, ed. Wagner (Pitt Press).

### German

### IV. Final Course

Mondays, Wednesdays and Fridays, at 9.30 a.m.

The work of this class comprises revision of elementary grammar, the elements of historical grammar and phonetics, translation, and composition. The class will be taught in German.

Fee for the course,  $\pounds_3$  13s. 6d.

Books recommended Goethe, Egmont, ed. Buchheim (Clarendon Press). Longmans' German Composition (Longmans, 3s.). Trechmann, Short Historical Grammar of the German Language

(Macmillan).

Rippmann, Elements of Phonetics (Dent).

#### V. German Literature

Lectures on *Goethe's Leben und Werke* will be given in German on Tuesdays, at 4 p.m., during the first and second terms, commencing October 9.

N.B.—This class will be continued during the third term for candidates reading for Honours or M.A. in German, or the Final B.A. examination.

Fee for the first two terms,  $\pounds_{I}$  is.; for one term, i.o. 6d.; for the whole course,  $\pounds_{I}$  is. 6d.

### VI. Lower Commercial Course

Tuesdays and Thursdays, at 3 p.m.

In addition to the study of German correspondence, &c., a book bearing on German commercial life will be read, the title of which will be announced at the beginning of the first term. The class will be taught in German.

Fee for the course,  $\pounds$ , 2 128. 6d.

Book recommended

Whitfield-Kaiser, Course of Commercial German (Longmans).

### VII. Higher Commercial Course

Tuesdays and Thursdays at 2 p.m.

The study of German correspondence, etc., will be continued, and German books on economic subjects will be read, the titles of which will be announced at the beginning of the first term. The class will be taught in German.

Fee for the course,  $\pm$ , 2 125. 6d.

#### Book recommended

Whitfield-Kaiser, Course of Commercial German (Longmans).

#### VIII. Honours Course

Mondays, Wednesdays and Fridays at 10.30 a.m.

The work of this class will comprise Middle High German grammar and literature, and interpretation of Old High German and Middle High German texts. Part of the work taken in this course is also suitable for graduates reading for the M.A. examination.

For books and periods see page 22.

Fee for the course,  $\pounds_3$  13s. 6d.

#### IX. Saturday Morning Training Course (A)

This class will meet on Saturdays, from 10.15 a.m. to 12.15 p.m., beginning October 6. (N.B. The hours may be slightly altered to meet the convenience of students living outside Leeds.)

The course will cover the work in language required for the First examination in connection with the University diploma for teachers of German (see p. 162), but students who are not candidates for the diploma will also be admitted on satisfying the Professor that they are sufficiently qualified.

Books will be recommended at the first meeting of the class.

Fee for the course,  $\pounds_2$  12s. 6d.

#### X. Saturday Morning Training Course (B)

This class will meet on Saturdays, from 10.15 a.m. to 12.15 p.m., beginning October 6. (N.B. The hours may be slightly altered to meet the convenience of students living outside Leeds.)

The course will cover the work in phonetics and methods of teaching required for the Second examination in connection with the University diploma for teachers of German (see p. 162), but students who are not candidates for the diploma will also be admitted on satisfying the Professor that they are sufficiently qualified.

Fee for the course,  $\pounds_2$  12s. 6d.

## History

## HISTORY

Professor Grant Mr. Young

## I. Matriculation Course

Outlines of English History. Tuesdays and Thursdays at 10.30 a.m. Fee for the course,  $f_{12}$  125. 6d.

#### II and III. Intermediate Courses

II. Outlines of Greek and Roman History. The following Lives of Plutarch will be studied in connection with this course :—Lycurgus, Solon, Pericles, Alexander, Marcus Cato, the Gracchi, Marius, Julius Caesar.

Mondays and Wednesdays at 11.30 a.m.

Fee for the course,  $\pounds_2$  125. 6d.; for Greek History or Roman History alone,  $\pounds_1$  115. 6d.

III. Modern History from 1763 to 1900.

Two hours a week at times to be arranged.

This course will not be given unless there are candidates for the degree of B.Com.

Fee for the course,  $\pounds$ , 2 12s. 6d.

## IV-X. Final Courses

### First Year:

IV. Outlines of European History since the Roman Empire.

Tuesdays and Thursdays, at 10.30 a.m. Fee for the course,  $\pounds_2$  125. 6d.

#### Books recommended

G. R. Adams, European History (Macmillan). Bourne, Modern History (Longmans). Myers, General History (Ginn). Robinson, Readings in European History, 2 vols. (Ginn).

V. Tutorial Class in the above course. Mondays at 2 p.m. Fee for the course,  $\pounds_{1}$  115. 6d. τ75

## Courses in Arts

### Second Year:

VI. Greek History from 445 to 399 B.C. This course will include the study of the intellectual and artistic, as well as the political, history of Greece during the period. No knowledge of Greek will be required.

Tuesdays and Thursdays at 9.30 a.m. Fee for the course,  $\pounds$ , 2 125. 6d.

VII. Roman History from 31 B.C. to 180 A.D. Tuesdays and Thursdays at 9.30 a.m. Fee for the course,  $\pounds_2$  12s. 6d.

VIII. English History from 1714 to 1815. Wednesdays at 11.30 a.m. and Fridays at 9.30 a.m. Fee for the course,  $\pounds_2$  125. 6d.

IX. European History: The Revolutionary and Napoleonic Era.

Mondays and Wednesdays at 9.30 a.m.

Fee for the course,  $\pounds 2$  125. 6d.

Note :— The above periods will be studied in connection with certain of the original authorities which will be indicated at the beginning of the session.

X. Economic History. (Professor CLAPHAM.)

The commercial and industrial history of England, mainly in the nineteenth century.

Two hours a week at times to be arranged. Fee for the course,  $\pounds_2$  128. 6d.

Candidates are recommended to choose from the above one ancient and one modern period.

## XI-XV. Honours and M.A. Courses.

XI. English Constitutional History. Tuesdays and Thursdays at 2 p.m. Fee for the course,  $\pounds_2$  125. 6d.

XII. Roman History from 31 B.C. to 14 A.D. Two hours a week at times to be arranged. Fee for the course,  $f_{2}$  125. 6d. XIII. The History of Political Theory.

Two hours a week at times to be arranged.

The course will include the problems and theories of the ancient city state; the medieval empire; the development of the theory of the social contract.

Fee for the course,  $f_{2125}$ . 6d.

XIV. A class for the study of certain original authorities on the History of France from 1789 to 1804.

One hour a week at a time to be arranged.

Among the authorities studied will be Rousseau's Social Contract; Constitutional Documents of the French Revolution; certain Orators of the French Revolution; Napoleon's Concordat; and Lord Whitworth's despatches from Paris in 1803.

Fee for the course,  $\pounds_1$  115. 6d.

XV. Essay Class.

Mondays at 3 p.m.

Fee for the course,  $\pounds_1$  115. 6d.

## PHILOSOPHY

Mr. GILLESPIE

#### I. Intermediate Course : Logic

Wednesdays and Fridays, at 2.

This course deals with the elements of logic, deductive and inductive. Students will find it useful to familiarise themselves with the elementary formal logic, in some such text-books as *Jevons* or *Fowler*, before entering the class.

Fee for the course,  $\pounds 2$  125. 6d.

Book recommended

Welton, Manual of Logic (2 volumes, Clive, 15s.).

## II. Final Course: Psychology

Three lectures a week throughout the session, at hours to be arranged.

This course includes the outlines of general psychology, with the more detailed study of some special branch.

A special course in psychology and ethics may be arranged for students who take the Final examination under the old regulations.

Fee for the course,  $\pounds_3$  13s. 6d.

Book recommended Stout, Manual of Psychology (Clive, 8s. 6d.).

#### III. Final Course: History of Ancient Philosophy

Three hours a week throughout the session, at hours to be fixed at the beginning of the first term.

Subjects : The outlines of the history of Greek philosophy with more detailed study of special books. The *Republic* of Plato will be read in the session 1906-7.

Fee for the course,  $\pounds_3$  13s. 6d.

### IV. Ancient Philosophy

Two hours a week throughout the session, at hours to be fixed at the beginning of the first term.

This course is intended for candidates for Honours in Classics, and will not be held unless such candidates present themselves.

Fee for the course,  $\pounds_2$  12s. 6d.

### V. Honours Courses

Lecture courses of one or two hours a week each on some of the subjects prescribed for the Honours School of Philosophy and for M.A. in Philosophy.

Fee for a course of two hours a week,  $\pounds_2$  12s. 6d; for a course of one hour a week,  $\pounds_1$  11s. 6d.

## EDUCATION

### Professor Welton

### Miss ROBERTSON

### Mr. WELPTON Miss MELVILLE

## Mr. HOGGETT

## Day Training College for Teachers for Primary Schools

A Day Training College, under the provisions of the Education Code, was established in 1891.

The following particulars are supplied for the information of King's Scholars who desire to be admitted to the Leeds Day Training College.

1. Pupil Teachers who have successfully completed their term of apprenticeship, or who terminate their engagement with the consent of their managers, and others who, not

## Education

having been Pupil Teachers, will be over 18 years of age at the commencement of the session in which they wish to enter, may apply for admission to the Leeds Day Training College. Such application should be made as early as possible.

2. Applicants will be required to furnish certificates of sound health and good conduct. Forms for such certificates will be supplied by the Registrar.

3. Applicants may be examined for admission at the King's Scholarship examination, held at Leeds and elsewhere in December.

Candidates for the King's Scholarship examination must give notice to the Board of Education before the 1st of October. That examination is held in Leeds, not at the University, but at the Education Offices, and candidates who wish to be examined in Leeds must apply to the Clerk of the Education Committee of the City Council for seats.

4. All candidates, whether they have passed the King's Scholarship examination or not, will be required to pass the Matriculation examination of the University before admission, and to declare their intention, if admitted, of completing the three years' course required for a degree.

5. To fulfil the regulations of the Board of Education, candidates for admission to the Day Training College should present themselves at the Matriculation examination in English Literature under (1), and in Geography under (3) of the Regulations for Matriculation, unless they possess certificates of having passed in one or both of these subjects at any equivalent University examination.

Candidates who propose to read for a degree in Arts must offer Latin and one other language under (3).

6. All candidates will, on admission, be required to sign a declaration of their intention to become Elementary teachers, and must be examined by the Medical Officer of the University.

7. Twenty Men and twenty-five Women King's Scholars may be admitted to the Day Training College next session. Those accepted will be required to come into residence at the beginning of October. They will be at liberty to reside at their own homes if these are within reasonable distance of the University, or they may, by permission of the Managing Committee of the Training College, reside in lodgings which have been inspected, and are registered and subject to inspection, by the University authorities.

8. The Leeds Day Training College year coincides nearly with the session of the University of Leeds, which begins in October, is divided into three terms of about eleven weeks each, and ends in June. Training College students will be engaged in their practical training during certain parts of the University vacations.

9. The Government grant for maintenance of  $\pounds 25$  a year for men and  $\pounds 20$  a year for women students will be paid, at the times and in the instalments prescribed by the Board of Education, to such King's Scholars as reside at home or in registered lodgings.

10. All King's Scholars admitted to the Training College will be required to pay annually a charge of  $\pounds$ 10, and also a sum of 10s. 6d., the compulsory fee payable for membership of the University Union. No further payment to the University will be required, but Scholars will have to provide their own books, and those who work in the University laboratories will have to supply themselves (by purchase or hire) with a small amount of scientific apparatus. The University examination fees will also have to be paid by all King's Scholars.

11. The King's Scholars in residence will be admitted without additional fee to the lectures, classes, and laboratory work required for their prescribed courses of study.

12. All students of the Day Training College will attend the classes and will be required to enter for the examinations qualifying for a degree of the University.

13. The Government certificate will be issued on the results of examinations conducted in part by the Board of Education and in part by the University. Students who offer approved University examinations will be allowed to substitute these for the greater part of the syllabus of the Certificate examination conducted by the Board of Education.

## Education

14. The professional training of the students is conducted by the staff of the Department of Education. This training includes courses of lectures and written exercises in the History, Theory, and Art of Education, supplemented by practical work in selected schools under the supervision of the professional staff. Needlework is under the charge of the Mistress of Method.

## Teachers for Secondary Schools

A full course of instruction in the theory and practice of education is provided for men and women students intending to become teachers in secondary schools. Such students attend the ordinary courses of lectures in Education and criticism lessons, and special courses to prepare for the Diploma in education of the University are provided as required.

Arrangements are also made for practical training in class teaching and management in certain selected secondary schools in Leeds or the immediate neighbourhood.

The whole course may be taken in one session, or may be spread over two or three sessions.

## Diploma in Education

For Regulations, see page 159.

### LECTURE COURSES

## I. Education: First Year Course

Lectures on Mondays, Wednesdays and Fridays, at 4 p.m.

Each Term—General nature of education. The psychological foundations of the general principles of educational method. Applications of the general principles of method to the teaching of the usual school subjects and the preparation of notes of lessons. Three hours a week.

*Each Term*—Criticism Lesson. One and a half hours a week on Thursdays at 3.15 p.m.

Fee (except for King's Scholars in the College) for lectures only,  $\pounds_3$  13s. 6d.; for lectures and criticism lessons,  $\pounds_4$  4s.

#### II. Education: Second Year Course

Lectures on Tuesdays and Thursdays at 9.30 a.m. throughout the session, and on Saturdays at 9.30 a.m. in the first term only.

*First Term*—Physical education and school hygiene. School organization. Special methods.

Second Term—The logical foundations of teaching.

*Third Term*—The psychological and ethical foundations of moral education, with applications to school discipline.

*Each Term*—Criticism Lesson. One and a half hours a week on Thursdays at 3.15 p.m.

Fee (except for King's Scholars in the College) for lectures only,  $\pounds_3$  3s.; for lectures and criticism lessons,  $\pounds_3$  13s. 6d.

## III. Education: Third Year Course

Course A. Tuesdays and Thursdays at 10.30 a.m. The history of educational thought in Western Europe from the Renascence to the present time, with special reference to England, and special emphasis on the Nineteenth Century.

Course B. Wednesdays at 3 p.m. Plato, *Republic*, ii, iii, iv. A discussion class on the Theory of Education will be held on Thursdays at 2 p.m. in the first and second terms. Attendance optional.

Criticism Lessons. Each term for one and a half hours per week. Thursdays at 3.15 p.m.

Fees (except for King's Scholars in the College):— Course A, for lectures only,  $\pounds_3$  3s.; for lectures and criticism lessons,  $\pounds_3$  13s. 6d. Course B, or the discussion class, without criticism lessons,  $\pounds_1$  11s. 6d.; with criticism lessons,  $\pounds_2$  2s.

### IV. Nature Knowledge and V. General Elementary Science.

A class is held on Saturdays from 9.30 a.m. to 12.30 p.m. for King's Scholars not qualified in these subjects.

#### VI. Drawing and Elementary Design

This course is arranged to meet the requirements of the students in the Day Training College, and consists of one lecture per week in the first and second years, together

## Education

with at least one hour per week for practical work. The classes will be arranged after the beginning of the session.

Students wishing to prepare for any subjects which they may require in order to complete the Elementary Drawing Certificate of the Board of Education may do so by arrangement with the lecturer.

## VII. Reading and Recitation

Classes will be held at times to be arranged.

## VIII. Music

For first and second year King's Scholars, on Thursdays, at 2 p.m. for choral music. Tutorial classes will be held at times to be arranged.

## IX. Needlework

For first and second year King's Scholars, two hours a week, at times to be arranged.

## X. Physical Exercises

For first and second year King's Scholars, two half hours per week for each year, at times to be arranged.

# DEGREE, DIPLOMA, AND COURSES OF STUDY IN COMMERCE

Students in the Department of Commerce may take a three years' course for the degree of Bachelor of Commerce, or a two years' course for the diploma in Commerce, according to the ordinance and regulations which follow.

## Degree of Bachelor of Commerce

Ordinance. I. The degree in Commerce shall be that of

Bachelor of Commerce (B. Com.).

2. All candidates for the degree of Bachelor of Commerce shall be required to have passed the Matriculation examination, with at least one modern foreign language as one of the subjects, and thereafter to have pursued approved courses of study for not less than three academic years.

3. The complete course of study for the degree of Bachelor of Commerce shall be divided into two parts, called respectively the Intermediate course and the Final course.

4. Every candidate shall be required to pass two examinations, the Intermediate and the Final.

5. The Intermediate and Final examinations shall ordinarily be held in June of each year.1 There shall also be a supplementary Intermediate examination in September, at which those candidates only may present themselves who have obtained the permission of the Senate.

6. Candidates who have failed at an Intermediate 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 committees, on report from the Examination committee for the degree of Bachelor of Commerce, may determine.

7. All students shall be required, before presenting themselves for the Intermediate or Final examination, to furnish to the Registrar certificates testifying that they have regularly

<sup>1</sup> In 1907, they will begin on Monday, June 10. The latest day for entry will be May 1.

attended the prescribed courses of study, and performed the class exercises to the satisfaction of the Professor or Lecturer, in each of the subjects which they offer at the examination.

## Intermediate Course and Examination

8. Every candidate shall be required, after passing the Matriculation examination, to attend during not less than one academic year approved courses of study in five subjects, viz. :

- i. Economics: the outlines of the economic history of England in the Nineteenth Century, and the general elementary principles of Economics
- ii. The economic geography of the British Empire
- iii. A modern foreign language (French or German)
- iv, v. Two of the following:
  - A second modern foreign language (French or German, whichever of the two has not been offered under iii)
  - Mathematics
  - European History from 1763,

and to pass in each of the subjects offered. The examination in each modern foreign language shall include an oral examination.

### Final Course and Examination

9. Every candidate shall be required, except as provided in clause 10, to attend approved courses of study, extending over two years, and to pass an examination in each of the following principal subjects :

- i. Economics: comprising (a) advanced general Economics (b) a special economic subject
- ii. A modern foreign language (French or German)
- iii. A second modern foreign language (French or German, whichever of the two has not been offered under ii)

iv. Accountancy.

The examination in each modern foreign language shall include an oral examination. An essay shall also form part of the examination.

# Diploma in Commerce

10. For the second modern foreign language or for Accountancy candidates may substitute *two* of the following, studied each for one year as a subsidiary subject :

- (a) The economic geography of the principal foreign countries
- (b) Commercial Law
- (c) Accountancy (unless Accountancy has already been offered as a principal subject).

Candidates may take the course of study in a subsidiary subject in the first year of the Final course, and present themselves at the end of that year for examination in such subject.

# Diploma in Commerce

For general regulations applicable to all diplomas, see page 159.

Candidates for the diploma must have passed the Matriculation examination, with at least one modern foreign language as one of the subjects, or some other public examination, which in the opinion of the Senate is of sufficiently high standing, and must thereafter have pursued approved courses of study for not less than two years.

# First Year Course and Examination

Economics

French or German

The economic geography of the British Empire

Accountancy

Mathematics *or* a second language *or* some other course to be approved by the Senate.

# Second Year Course and Examination

I. Compulsory subjects :

Economics, more advanced general course

French or German

The economic geography of the principal foreign countries

Accountancy, second year course Commercial Law.

186

Regulations.

### II. Optional subjects:

Candidates for the diploma may also take, in their second year, an optional course in a second foreign language *or* a short course in the Textile, Engineering, or other Technological Department of the University.

# Courses of Study

The following syllabus explains more in detail the nature of the various courses. All the classes are open, as in other Departments of the University, to students who are not candidates for a degree or diploma.

#### I. Economics

#### Professor CLAPHAM

First Year Course.—Mondays, Wednesdays and Fridays, 2 p.m.

Second Year Course.—Three hours a week at times to be arranged.

Third Year Course.—Times and hours to be arranged.

*First Year*: The first term will be given to the study of the modern commercial and industrial history of England, mainly in the nineteenth century. This will lead up to the explanation of the leading features of the existing industrial and commercial organisation of the country. The main principles connected with the production and distribution of wealth, with wages, profits, interest and rent, and the values of goods and services will be dealt with. A preliminary study of the English monetary and banking system will be made, and attention will be given to foreign trade, the exchanges, and the relations of government to trade.

Second Year: This course will be of a more advanced character, and will be largely descriptive, though some of the more difficult general principles of Economics will also be dealt with. It will include such topics as the organisation of the chief markets; the money market; the Stock Exchange; price fluctuations and commercial crises and depressions; more advanced monetary and banking questions; combinations, their characters and policies; trade unions, their aims and methods; railways and railway rates. The latter part of the course will be given to public finance—rates, taxes, debts, the Budget.

Third Year: In this year candidates for the B.Com. will study in detail some selected branch of Commerce or of Economics. The practical details as well as the history and general principles of the special subject will be kept in view. Subjects will be chosen from time to time to suit the needs of various classes of students, as the work and staff of the Department grow. Among these subjects will be: Foreign trade, transport (including railway economics), money and banking.

Fee for the session for each three hours' course,  $\pounds_3$  135. 6d.

### II. Economic Geography

Professor CLAPHAM

# First Year Course.—The British Empire, Tuesdays and Thursdays, at 4 p.m.

Second (or Third) Year Course.—The principal foreign countries, two hours a week at times to be arranged.

These two courses will supplement those in Economics. They will deal with the geographical basis of trade; with the situation, features, population, mineral, and other resources and industrial and commercial development of the various countries. Trade routes, including railway and canal systems, will be studied geographically. The import and export trades of each country will be examined; and also the distribution of the leading industries, the special features of each, the sources of its raw material and the markets for its goods. The courses will also include an examination of commercial policy in each of the countries dealt with.

Fee for the session, for either course,  $\pounds_2$  125. 6d.

### III. Commercial Law

# Professor PHILLIPS

Tuesdays and Thursdays at 3 p.m. throughout the session.

First Term: The general principles of the law of contract; the conception of contract in English Law; doctrine of consideration; statute of frauds; Sale of Goods Actmistake-misrepresentation-fraud-illegality; assignment of contract, discharge of contract.

Second Term: Two independent short courses each of one hour a week: (a) Law of negotiable instruments; (b) Law of Bankruptcy.

Third Term: Two independent courses as in the second term: (a) Industrial Law or Law as to Employers and Employed; (b) Company Law.

Fee for the session,  $\pounds 2$  125. 6d; for one term,  $\pounds 1$  55.; for sections (a) or (b) in the second or third terms, 155. each.

# IV. Accountancy

# Mr. Shaw

First Year Course.-Wednesdays, 3 p.m.

Second Year Course.—Wednesdays, 4 p.m., and at a second hour to be arranged.

Third Year Course.—Hours to be arranged.

First Year: The course will deal with (1) the general principles of book-keeping, illustrated by the ordinary transactions of a merchant or manufacturer; (2) the special principle of book-keeping by double entry; (3) the books themselves—various subsidiary books, leading up to the ledger; (4) the trial balance and the various methods of preparing it; (5) the preparation of the trading account, profit and loss account and balance sheet; (6) cheques, bills of exchange, and other important commercial documents.

Second Year: (1) Partnership accounts and other more complicated transactions; (2) the different forms of books and accounts suitable for various kinds of businesses; (3) the various methods of stock-taking; (4) the books and forms used for limited companies in connection with the share capital, debentures, &c., a study of the balance sheets of a number of companies; (5) departmental accounts; (6) the preparation of accounts required for income tax purposes.

Third Year: (1) The analysis of accounts with a view to the computation of earnings and comparison of expenses; (2) costing and cost accounts; (3) sinking funds, provision

for depreciation, &c.; (4) the various methods of payment of wages and of remuneration for management; (5) limited companies—public and private—their advantages and disadvantages; (6) fixed charges and the relation of selling prices to cost prices; (7) goodwill.

Fee for the First Year Course,  $\pounds_1$  115. 6d.; for the Second Year Course,  $\pounds_2$  125. 6d.

# French

#### Professor BARBIER and Dr. RUDMOSE-BROWN.

#### German

# Professor SCHUDDEKOPF and Mr. GOUGH

In the degree course students in their first year will take the same work in languages as Arts students, including composition, translation at sight, dictation, conversation and the study of prescribed books. It is not thought desirable that the teaching should be specialised at this stage in the case of degree students.

During the second and third years, in preparation for the final examination, students will continue some parts of the general work and teaching, but will also read specially selected books of an economic or commercial character, and they will have opportunities of studying (1) correspondence, and (2) the institutions of the country whose language they are learning.

Diploma students will, as a rule, give special attention to correspondence and reading of a commercial character during both years of their course.

#### European History since 1763

# Professor GRANT

This course, one of the options for the Intermediate examination, is intended to introduce students to the main facts in the political history of the nineteenth century. It is thought that it will be a valuable part of a general modern education, such as the B.Com. course aims at providing, and will bring out the connection of the economic and commercial studies, which form the bulk of the course, with politics and social developments. It will also assist in the study of the languages and institutions of foreign countries.

190

# Courses in Commerce

# Mathematics

# Professor Rogers

The course in Mathematics will be that for the Intermediate B.A. It is intended for students who propose to enter a career such as that of an accountant, in which a mathematical training may be of special value.

# Evening Classes

See under Evening Classes, page 339.

# DEGREES IN LAW

Ordinance.

1. The degrees in Law shall be :

Bachelor of Laws (LL.B.) Doctor of Laws (LL.D.).

# Degree of Bachelor of Laws

2. All candidates for the degree of Bachelor of Laws shall be required to have passed the Matriculation examination, except those who may be exempted therefrom, and thereafter to have pursued approved courses of study for not less than three academic years.

3. The complete course of study for the degree of Bachelor of Laws shall be divided into two parts, called respectively the Intermediate course and the Final course.

4. Every candidate shall be required to pass two examinations, the Intermediate and the Final.

5. The Intermediate and Final examinations shall ordinarily be held in June of each year.<sup>1</sup>

6. All candidates shall be required, before presenting themselves for the Intermediate or Final examination, to furnish to the Registrar certificates testifying that they have regularly attended the prescribed courses of study in each of the subjects which they offer at the examination.

### Intermediate Course and Examination

7. Every candidate shall be required, after passing the Matriculation examination, or after obtaining exemption therefrom, to attend during one academic year approved courses of study, and to pass in each of the following subjects :

i. Roman Law

ii. Elements of English Law

- iii. The Law and Custom of the English Constitution
- iv. Any subject included in the course for the Intermediate examination for the Ordinary degree of B.A. or B.Com.

<sup>1</sup> In 1907 they will begin about June 10. The latest day for entry will be May 1.

# Degrees in Law

Provided that candidates who are already graduates of this or any other University within the United Kingdom shall not be required to attend classes or to be examined in iv.

# Detailed subjects of study and of examination

ROMAN LAW:

The Institutes of Justinian, edited by Moyle. The subjects of Intestate Succession and Procedure are to be studied in outline only. Students must, from the notes in the text book and from lectures, make themselves familiar with the general history of Roman Law, and particularly with the state of the law in the time of Gaius.

ELEMENTARY ENGLISH LAW:

Stephen's Commentaries, Vols. i, ii, iii.

LAW AND CUSTOM OF THE ENGLISH CONSTITUTION :

Dicey's Law of the Constitution; Anson's Law of the Constitution, Parts I and II.

**OTHER SUBJECTS:** 

See the Regulations for Intermediate courses for the Ordinary degree of B.A. and the degree of B.Com.

#### Final Course and Examination

Ordinance.

Regulations.

8. Every candidate shall be required to attend during two academic years one or other of the following courses of study, and to pass in each of the subjects of the selected course:

# Course I.

- i. Roman Law
- ii. Jurisprudence
- iii. Public or Private International Law.

An essay paper shall be set at the Final examination for all candidates taking this course.

#### Course II.

- i. Property, Real and Personal (including Conveyancing)
- ii. Equity (including Company Law)
- iii. Common Law (including Criminal Law and Bankruptcy)
- iv. Evidence and Procedure
- v. Jurisprudence.

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#### Degrees in Law

Regulations.

### Detailed subjects of study and of examination

# Course A

ROMAN LAW:

194

- The General History of Roman Law, including the History of the Roman Constitution; the Principles of Roman Law as stated in the *Institutes* of Gaius and Justinian; a selected Title or selected Titles of the *Digest*. (Title selected for 1908 : Book XIX., Tit. I. De Actionibus Empti Venditi.)
- The following books are recommended (not prescribed) in order to show the scope of the course :
- History of Roman Law: Roby's Introduction to the Study of the Digest; Sohn's Institutes of Roman Law; Muirhead's Law of Rome.
- The Principles of Roman Law: Gaius, edited by Poste; Justinian, edited by Moyle; Roby's *Roman Private Law*; Gneist's *Syntagma*.

JURISPRUDENCE. (Historical and Analytical):

The following books are recommended (not prescribed) in order to show the scope of the course :

Austin's Jurisprudence; Clark's Practical Jurisprudence; Markby's Elements of Law; Holland's Jurisprudence; Maine's Ancient Law, Village Communities, Early History of Institutions, and Early Law and Custom; Salmond's Jurisprudence.

INTERNATIONAL LAW:

- The following books are recommended (not prescribed) in order to show the scope of the course :
- (a) PUBLIC: Lawrence's Principles of International Law; Oppenheim's International Law; Maine's Lectures on International Law; Pitt Cobbett's Leading Cases in International Law; Grotius's De Jure Belli et Pacis (edited by Whewell).
- (b) PRIVATE: Westlake's Private International Law; Dicey's The Law of Domicile; Foote's Private International Jurisprudence; The Reported Cases.

#### Course B

In this course it is not thought necessary to give more detailed information than that contained in the Ordinance.

# Degree of Doctor of Laws

The Regulations for the degree of Doctor of Laws are under consideration.

NOTE. The following is an extract from the Consolidated Regulations of the Inns of Court :

"The Council may accept a degree granted by any University within the British Dominions, for which the qualifying examination was in Law, as an equivalent for the examination in any of the subjects mentioned in Rule 43 (Roman Civil Law, the Law of Real and Personal Property, Common Law and Equity) other than Common Law and Equity."

Undergraduates of this University can keep their terms at any of the Inns of Court by dining in Hall any *three* days in each Term.

# DEPARTMENT OF LAW

Supported by the Yorkshire Board of Legal Studies

# Professor Phillips Dr. Chapman Mr. Owen

The Law Department of the University of Leeds has been founded by the Yorkshire Board of Legal Studies, assisted by the Law Society of the United Kingdom, and is intended to afford systematic instruction throughout the academic year to students preparing for

- 1. The examinations for the degrees in Law of the University of Leeds,
- 2. The examinations of the Council of Legal Education, preparatory to call to the Bar, and
- 3. The examinations of the Law Society of the United Kingdom, qualifying for admission to practice as a Solicitor.

Most of the classes will also be found useful to candidates for the Law degree of the University of London.

Students pursuing the requisite course of study for  $\Rightarrow$ University degree in Laws, or for the examinations of the Council of Legal Education or of the Law Society of the United Kingdom, will, after registration and payment of the entrance fee, be admitted to all the University lectures and classes that are arranged to meet their special requirements for an annual composition fee (paid in advance) of  $\pounds 8$  8s. Students who are preparing for *both* a degree in Law and admission to the rolls as solicitors may attend all the lectures and classes for this double purpose for an annual composition fee of  $\mathcal{L}_{10}$  10s. These composition fees do not cover any laboratory work that may be taken for the Intermediate examination. Those who desire to attend less than four lectures or classes may pay the separate fees of the classes selected. Candidates for the examinations of the University of Leeds must, however, comply with the University regulations as to the number of hours of weekly attendance to be given to the prescribed courses.

The courses will be arranged so as to give preparation for the Intermediate examinations in one session, and for the Final examinations in two sessions.

Professor Phillips would be glad to confer with Law students on all questions concerning their examinations, and to render them such assistance as might be in his power.

In cases where the hours of the lectures and classes are not stated, arrangements will be made in accordance with the requirements of individual students and the convenience of the majority.

In connection with the lecture courses announced in the following pages, tutorial classes are held for which no additional fees are charged. Special tutorial classes are also provided for students preparing for the Final examinations of the Law Society, particulars of which are given on page 201.

#### DEGREE OF BACHELOR OF LAWS

# Intermediate Course

#### I. Roman Law

PROFESSOR PHILLIPS

Mondays, at 2 p.m., throughout the session. Fee for the course,  $\pounds_{,2}$  2s.

#### II. Elements of English Law

### DR. CHAPMAN

Mondays and Thursdays, at 4 p.m., throughout the session.

Fee for the course,  $\pounds_3$  3s.

# Courses in Law

# III. The Law and Custom of the English Constitution PROFESSOR PHILLIPS

Mondays, at 3 p.m., throughout the session. Fee for the course,  $\pounds_{12}$  2s.

# IV. Other Subjects

For particulars of classes in Greek, Latin, French, German, English Literature, English Language, Ancient History, Modern History, Logic, Mathematics, Physics, Chemistry, Geology, Economics, and Economic Geography, see Courses in Arts and Science.

# **Final** Course

# Course I

# I. Roman Law

# Professor PHILLIPS

Mondays and Thursdays, at 10.30 a.m., throughout the session.

Fee for the course,  $\pounds_3$  3s.

#### II. Jurisprudence

#### Professor PHILLIPS

Mondays and Thursdays, at 11.30 a.m., throughout the session.

Fee for the course,  $\pounds_3$  3s.

### III. Public International Law

Professor PHILLIPS

Tuesdays and Fridays, at 10.30 a.m., throughout the session.

Fee for the course,  $\pounds_3$  3s.

### Course II

#### I. Real and Personal Property

# Dr. CHAPMAN

A course of lectures of one hour a week throughout the session will be given at times to be arranged.

Fee for the course,  $\pm$ , 2 2s.

# Courses in Laze

# II. Equity (including Company Law)

### Dr. Chapman

A course of lectures on the Principles of Equity, of one hour a week throughout the session, will be given at times to be arranged.

Fee for the course,  $\pm$ , 2 2s.

# III. (a) Common Law

# Professor PHILLIPS

During the session 1906-7, a course of lectures on the Law of Torts, of one hour a week throughout the session, will be given at times to be arranged, to be followed in the next session by a course on the Law of Contract.

Fee for the course,  $\pounds_2$  2s.

# III. (b) Criminal Law

# Professor PHILLIPS

A course of lectures on Criminal Law and Practice, of one hour a week throughout the session, will be given at times to be arranged.

Fee for the course,  $\pounds_2$  2s.

#### III. (c) Bankruptcy

#### Professor PHILLIPS

A course of lectures on the Law and Practice of Bankruptcy, of one hour a week throughout the session, will be given at times to be arranged.

Fee for the course,  $\pounds_2$  2s.

# IV. Evidence and Procedure

Dr. Chapman

A course of lectures on Legal Evidence and Procedure, of one hour a week throughout the session, will be given at times to be arranged.

Fee for the course,  $\pounds_2$  2s.

#### V. Jurisprudence

#### Professor PHILLIPS

A course of lectures on Jurisprudence will be given in the session 1907-8. Particulars will be given in next year's Calendar.

# Courses in Law

# EXAMINATIONS OF THE COUNCIL OF LEGAL EDUCATION

Classes I. and III. in the Intermediate course for the degree will prepare also for the examinations of the Council of Legal Education.

# EXAMINATIONS OF THE LAW SOCIETY

# Intermediate Examination

# The Elements of English Law

DR. CHAPMAN

Mondays and Thursdays, at 4 p.m. throughout the session. Subject: Stephen's *Commentaries on the Laws of England*. This class will be mainly tutorial. Fee for the course,  $\pounds_3$  3s.

# Final Examination

#### Real and Personal Property

### DR. CHAPMAN

A course of classes of one hour a week throughout the session will be held at times to be arranged.

Fee for the course,  $\pounds_2$  2s.

#### Conveyancing

### DR. CHAPMAN

A class for tuition in the practice of Conveyancing will be held once a week throughout the session. The time of meeting will be arranged.

Fee for the class,  $\pounds_2$  2s.

# Common Law

# Professor PHILLIPS

During the session 1906-7, a course of classes on the Law of Torts, of one hour a week throughout the session, will be held at times to be arranged, to be followed in the next session by a course on the Law of Contract.

Fee for the course,  $\pounds_2$  2s.

#### Equity

#### Dr. Chapman

A course of classes in the Principles of Equity, of one hour a week throughout the session, will be held at times to be arranged.

Fee for the course,  $\pounds_2$  2s.

# Bankruptcy

#### Professor Phillips

Classes will meet once a week during the session at times to be arranged.

Fee for the course,  $f_{22}$  2s.

# Criminal Law

### Professor PHILLIPS

Classes will meet once a week during the session at times to be arranged.

Fee for the course,  $\pounds_2$  2s.

#### Company Law

DR. CHAPMAN

A course of lectures on the Law and Practice of Joint Stock and other Companies will be given during the first and second terms. The class will meet once a week, at times to be arranged.

Fee for the course,  $\pounds_1$  115. 6d.

#### Equitable Procedure

# DR. CHAPMAN

A class for tuition in the practice of the Chancery Division of the High Court of Justice will be held once a week during the third term, at an hour to be arranged.

Fee for the course,  $\pounds_1$  is.

#### Legal Evidence and Procedure

#### DR. CHAPMAN

A course of lectures on the Law of Evidence and Procedure in the King's Bench Division of the High Court of Justice will be given throughout the session. The class will meet once a week, at an hour to be arranged.

Fee for the course,  $f_{22}$  2s.

200

# Probate, Divorce, and Admiralty Law DR. CHAPMAN

A class for tuition in the principles of Law and Procedure in Probate, Divorce, Admiralty, and Ecclesiastical Cases will be held once a week throughout the session, at an hour to be arranged.

Fee for the course,  $\pounds_2$  2s.

# Tutorial Classes

In the case of students who are about to present themselves for the Final examination of the Law Society, there will be held during each term Tutorial Classes, the work of which will be revisionary. These classes will be open only to such students as have attended a complete course of classes in the Law Department of the University. The Tutorial Classes of each term will be complete in themselves.

Fee for the classes,  $f_{,2}$  2s. per term.

N.B.—This fee is not included in any composition fees.

#### LAW CLASSES

#### IN DEPARTMENT OF COMMERCE

For particulars of lectures on Commercial Law and on the Law of Income Tax see pages 188 and 340 respectively.

# LAW CLASSES AT HULL

MR. OWEN

During the first and second terms two lectures a week are given on Stephen's *Commentaries*, preparatory for the Intermediate examination of the Law Society, and two lectures a week on certain subjects preparatory for the Final examination of the Law Society.

Fee for each course,  $\pounds_1$  is.

# EXTENSION LECTURES IN LAW

Extension lectures in Law subjects may be arranged by Local Committees. For particulars see the special prospectus of Extension lectures.

# DEGREES IN SCIENCE

Ordinance.

 The degrees in Science shall be : Bachelor of Science (B.Sc.) Master of Science (M.Sc.) Doctor of Science (D.Sc.).

# DEGREE OF BACHELOR OF SCIENCE

2. The degree of Bachelor of Science shall be conferred either as an Ordinary degree or as a degree with Honours.

3. All candidates for the degree of Bachelor of Science shall be required to have passed the Matriculation examination, and thereafter to have pursued approved courses of study for not less than three academic years.

# Ordinary Degree of Bachelor of Science

4. The complete course of study for the Ordinary degree of Bachelor of Science shall be divided into two parts, called respectively the Intermediate course and the Final course.

5. Every candidate shall be required to pass two examinations, the Intermediate and the Final.

6. The Intermediate and Final examinations shall ordinarily be held in June of each year.<sup>1</sup> There shall also be a supplementary Intermediate 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 an Intermediate 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 committees, on report from the Examination committee concerned, may determine.

8. All candidates shall be required, before presenting themselves for the Intermediate or Final examination, to furnish to the Registrar certificates testifying that they have regularly attended the prescribed courses of study, and performed the class exercises to the satisfaction of the Professor or Lecturer, in each of the subjects which they offer at the examination.

1 In 1907 they will begin on Monday, June 10. The latest day for entry will be May 1.

9. The proficiency of candidates in laboratory work may be determined by inspection of their laboratory note books and the consideration of terminal or sessional reports from their laboratory teachers. Candidates may also be called upon to undergo a special practical examination at the Intermediate and Final stages of the degree course.

It shall always be in the power of the External Examiner to impose a practical or *viva voce* examination on such occasions as he may think desirable.

#### Intermediate Course and Examination

10. Every candidate shall be required, after passing the Matriculation examination, to attend during not less than one academic year approved courses of study in three subjects (one of which must be Mathematics or Physics) selected from the following :

Mathematics Physics Chemistry Biology Geology,

and to pass in each of the subjects selected.

Candidates who propose to take an Applied Science (see section 15) in the Final course must pass in the subjects of the Intermediate course specified in section 20.

11. Every candidate is further required, at some time during his course, to take an additional subject at the Intermediate standard, selected from the following: Greek, Latin, French, German, English Literature, English Language, Ancient or Modern History, Logic, Economics, Economic Geography, Mathematics, Physics, Chemistry, Biology, Geology. In the case of candidates taking an Applied Science as a principal subject in the Final course (section 20 below), this list is increased by the addition of Applied Mechanics and General Engineering.

12. A descriptive essay relative to the scientific or technical work of the candidates will be set as part of the Intermediate examination, and will be examined by the Examiners in English in co-operation with the Examiners in the scientific department concerned, and in the event of a student failing in this portion of the Intermediate examination, he shall be permitted to take it again at any subsequent Intermediate examination.

# Detailed subjects of study and of examination

Regulations.

The scope of the work required may be understood from the following references to the courses of study preparing for this examination (see pages 227-249). The amount of laboratory work mentioned below is that ordinarily required. It may be varied on special grounds with the sanction of the Senate.

MATHEMATICS: Course III.

PHYSICS: Course II. Laboratory work, three hours a week.

CHEMISTRY: Course I. Laboratory work, six hours a week.

BIOLOGY : Course I. Laboratory work, six hours a week.

GEOLOGY: Course I. Laboratory work, three hours a week.

- APPLIED MECHANICS: The work covered by Part I of Engineering Course I, together with graphical constructions, strength of materials, transmission of power and mechanics of machines as given in Engineering Course VI.
- GENERAL ENGINEERING: Course II A, with Engineering Drawing.
- GREEK, LATIN, FRENCH, GERMAN, ENGLISH LITERATURE, ENGLISH LANGUAGE, ANCIENT OR MODERN HISTORY, LOGIC: The same as for Intermediate Arts.

ECONOMICS, ECONOMIC GEOGRAPHY: The same as for Intermediate Commerce.

# Final Course and Examination<sup>1</sup>

Ordinance.

13. Every candidate will be required to attend approved courses of study either in two principal subjects, or in one principal subject and two subsidiary subjects, provided that the same subject shall not be taken both as a principal and a subsidiary subject. One of the subjects selected must be Mathematics, Physics, Chemistry, or an Applied Science.

In the Final examination there will be included, for translation into English, passages of French and German, relating to the principal subject or subjects of a candidate's degree course, and credit will be given for correct renderings of such passages. In the case of candidates who have passed

<sup>1</sup> In certain cases, students who began their course for the degree under the scheme previously in force may obtain permission to present themselves for the Final examination according to the regulations appearing in the Calendar for 1904-5.

# Ordinary Degree of B.Sc.

neither in French nor in German at the Matriculation examination, and who have passed neither in French nor in German as an additional subject at the Intermediate standard, it shall be obligatory to satisfy the Examiners in the translation of one of the aforesaid passages from either French or German.

14. The course of study in each principal subject shall extend over at least two years beyond the Intermediate standard, and the course of study in a subsidiary subject shall extend over at least one year beyond the Intermediate standard.

# Principal Subjects

15. The principal subjects shall be selected from the following lists :

Pure Sciences:

Mathematics Physics Chemistry Zoology Botany Physiology Geology.

Applied Sciences1:

Mechanical Engineering

Civil Engineering

Electrical Engineering

Mining Engineering

Agriculture

Applied Chemistry (Colour Chemistry and Dyeing)

Applied Chemistry (Chemistry of Leather Manufacture).

Every candidate taking Physics as a principal subject is required to have passed in Mechanics at the Matriculation examination, or to satisfy the Professor of Physics that he possesses an adequate knowledge of the subject.

1 The addition of Applied Chemistry (Fuel and Metallurgy) to this list is under consideration.

In the event of Physiology being chosen as a principal subject, the second principal or the two subsidiary subjects shall be chosen from among the following: Physics, Chemistry, Zoology, Botany. In any case, six months' instruction in Human Anatomy will be required.

Every candidate taking an Applied Science as a principal subject is required to pursue one of the courses specified in section 20.

# Subsidiary Subjects

16. The subsidiary subjects shall be selected from the following list:

Mathematics I (Pure) Mathematics II (Pure and Applied) Physics Chemistry Zoology Botany Physiology Geology Human Anatomy Bacteriology Education (including the teaching of Elementary Science).

Mathematics I and II cannot be taken together as subsidiary subjects.

17. The following subjects shall rank as subsidiary subjects in connection with courses where Mechanical or Civil or Electrical or Mining Engineering is taken as a principal subject :

Mechanical Engineering Civil Engineering Electrical Engineering Mining Engineering.

18. The course of study in the subsidiary subjects may be taken either in the first or second year of the Final course.

19. Candidates who have attended, during the first year of their Final course, the prescribed course of study in a subsidiary subject, may present themselves in the following June for examination in such subsidiary subject. When Education is taken as a subsidiary subject, part of the examination may be taken at the end of each of the two years of the Final course. Candidates who fail to satisfy the examiners in such parts of the Final examination as they have taken at the end of the first year of their Final course shall be required to repeat this part of the examination at a subsequent June examination.

# Courses for candidates taking an Applied Science

20. Candidates selecting an Applied Science as a principal subject are required to attend courses of study and to present themselves for examination in definite subjects, as specified below:

# Mechanical Engineering:

- Intermediate—Mathematics, Physics, and Chemistry; additional subject at Intermediate standard, Applied Mechanics.
- Final—Principal subject, Mechanical Engineering; subsidiary subjects, Mathematics, and either Physics or Civil or Electrical or Mining Engineering, but in any case the candidate shall produce a certificate of having satisfactorily attended a prescribed course in Physics.

# Civil Engineering :

- Intermediate—Mathematics, Physics and Chemistry; additional subject at Intermediate standard, Applied Mechanics.
- Final—Principal subject, Civil Engineering; subsidiary subjects, Mathematics, and either Geology or Mechanical or Electrical or Mining Engineering, but in any case the candidate shall produce a certificate of having satisfactorily attended a prescribed course in Geology.

# Electrical Engineering:

Intermediate—Mathematics, Physics, and Chemistry; additional subject at Intermediate standard, Applied Mechanics. Final—Principal subject, Electrical Engineering; subsidiary subjects, Mathematics, and either Physics or Mechanical or Civil or Mining Engineering, but in any case the candidate shall produce a certificate of having satisfactorily attended a prescribed course in Physics.

Mining Engineering :

- Intermediate—Mathematics, Physics, and Chemistry; additional subject at Intermediate standard, Applied Mechanics.
- Final—Principal subject, Mining Engineering; subsidiary subjects, two of the following: Mathematics, Geology, Mechanical, or Electrical Engineering, but candidates shall produce certificates of having satisfactorily attended prescribed courses of study in each of these four subjects.

Agriculture :

- Intermediate—Physics, and two of the following: Chemistry, Biology, Geology; together with an additional subject at Intermediate standard (see section 11).
- Final—Agriculture, as principal subject, together with one of the pure sciences specified under section 15 above as the second principal subject, or two of the pure sciences specified under section 16 as subsidiary subjects.

Applied Chemistry (Colour Chemistry and Dyeing):

- Intermediate—Mathematics, Physics, and Chemistry; additional subject at Intermediate standard, General Engineering.
- Final—Two principal subjects, viz.: Colour Chemistry and Dyeing, and Chemistry.

Candidates presenting Applied Chemistry (Colour Chemistry and Dyeing) may not present this subject until the end of the fourth year of study. Such candidates may take the examination in Chemistry at the end of the third year.  Applied Chemistry (Chemistry of Leather Manufacture): Intermediate—Three of the following: Mathematics, Physics, Chemistry, Biology, and an additional subject at Intermediate standard (see section 11).
 Final—Two principal subjects, viz.: Chemistry of Leather Manufacture, and Chemistry.

# Detailed subjects of study and of examination

The scope of the work required may be understood from Regulations. the following references to the courses of study preparing for this examination (see page 227, etc.). The amount of laboratory work mentioned below is that ordinarily required. It may be varied on special grounds, with the sanction of the Senate.

I. Principal Subjects, studied for Two Years

MATHEMATICS: Courses V, VI, and VII.

- PHYSICS: Courses III and IV. Laboratory work, six hours a week for two sessions.
- CHEMISTRY: Courses II, III, IV, and V(C). Laboratory work, twelve hours a week for two sessions.
- ZOOLOGY: Course III, (A and B). Laboratory work, six hours a week for two sessions.
- BOTANY: Course IV, (A and B). Laboratory work, six hours a week for two sessions.

PHYSIOLOGY : Courses I, II, and IV.

GEOLOGY: Course II, and one of courses III, IV, and V-Laboratory work, six hours a week for two sessions, together with an approved course of Field Geology.

MECHANICAL ENGINEERING: Courses I, VI, VII, VIII, VIII a, VIII b, and IX.

- CIVIL ENGINEERING: Courses I, III, IV, VI (the parts relating to graphical constructions, strength of materials, air, transmission of power, and hydraulics), VII, (the parts relating to hydraulics and compressed air), VIII, VIII a, VIII b, and IX.
- ELECTRICAL ENGINEERING: Courses I, II, III, and IV. Laboratory work, nine hours a week for two sessions.
- MINING ENGINEERING: Courses I and II. Practical work, fifteen hours a week for one session.
- AGRICULTURE: General Agricultural courses, and special courses in two of the following :--Agricultural Chemistry, Agricultural Botany, Agricultural Zoology, Agricultural Geology, Agricultural Entomology, Agricultural Economics, Veterinary Science, Bacteriology, Surveying. Practical work for six months on the Manor Farm, Garforth.

- APPLIED CHEMISTRY (COLOUR CHEMISTRY AND DYEING): Courses I, II, III, and IV. Laboratory work, twenty-four hours a week for two sessions.
- APPLIED CHEMISTRY (CHEMISTRY OF LEATHER MANUFACTURE): Courses I, II, III, IV, and V. Laboratory work, twelve hours a week for two sessions.

#### II. Subsidiary Subjects, studied for One Year

MATHEMATICS I (PURE): Course VI.

- MATHEMATICS II (PURE AND APPLIED): Courses V and VI.
- PHYSICS: Course III. Laboratory work, six hours a week for one session.
- CHEMISTRY: Courses I and II, or course IV, or course V (C). Laboratory work, twelve hours a week for one session.
- ZOOLOGY: Course III, either A or B. Laboratory work, six hours a week for one session.
- BOTANY: Course IV, either A or B. Laboratory work, six hours a week for one session.
- PHYSIOLOGY: Courses I and IV.
- GEOLOGY: Course II. Laboratory work, six hours a week for one session, together with an approved course of Field Geology. HUMAN ANATOMY: Courses I (Part I) and II.
- BACTERIOLOGY: Course I. Laboratory work, forty-five hours during one session.
- EDUCATION: Courses I and II. Instruction in the method of teaching elementary science will be regarded as equivalent to laboratory attendance.

MECHANICAL ENGINEERING : Courses VI, VIII, and IX.

- CIVIL ENGINEERING : Courses III, IV, VIII, and VIII a.
- ELECTRICAL ENGINEERING: Course I. Practical work, six hours a week for one session.
- MINING ENGINEERING: Course II. Practical work (either Mine Surveying, or Ore Dressing, or Assaying), six hours a week for one session.

# Degree of Bachelor of Science with Honours

Ordinance

1. The degree of Bachelor of Science with Honours will be awarded in the following subjects<sup>1</sup>:

Mathematics Physics Chemistry

 $<sup>\</sup>tau$  The addition of Applied Chemistry (Fuel and Metallurgy) to this list is under consideration.

Honours Schools

Zoology Botany Physiology Geology Civil Engineering Mechanical Engineering Electrical Engineering Mining Engineering Applied Chemistry (Chemistry of Leather Manufacture) Applied Chemistry (Colour Chemistry and Dyeing)

# Agriculture.

2. Candidates will be required to present certificates of attendance upon approved courses of study extending over three or four years, as defined under the regulations for each Honours School. Such certificates of attendance shall only be granted when the candidate has regularly attended to the work of the classes and has acquitted himself satisfactorily at the class examinations.

3. Candidates for Honours must present certificates that they have satisfied the Examiners in such subjects as would fulfil the requirements of the Intermediate examination (including the additional subject), but they will be excused the examination in any subject which they will subsequently present at a more advanced standard. They must also attend the recognised classes and pass in one principal or two subsidiary subjects of the Final examination for the Ordinary degree, provided that such subjects shall not include the subject in which they are presenting themselves for Honours. It shall not be obligatory to pass simultaneously in the subjects thus prescribed, whether at the Intermediate or at the Ordinary Final standard.

4. A special examination in connection with each Honours School will be held at the end of the course of study, ordinarily in June of each year.<sup>1</sup> Candidates who have prosecuted research may be excused part of this examination.<sup>2</sup>

211

<sup>1</sup> In 1907, this examination will begin on Monday, June 10. The latest day for entry will be May 1.

<sup>&</sup>lt;sup>2</sup> Further regulations relating to research work offered by candidates will be announced at a later date.

5. In the Final examination there will be included, for translation into English, passages of French and German relating to the subject in which the candidate is presenting himself for Honours. In the case of candidates who have passed neither in French nor in German at the Matriculation examination, and who have passed neither in French nor in German as an additional subject at the Intermediate standard, it shall be obligatory to satisfy the Examiners in the translation of one of the aforesaid passages from either French or German.

6. Names of candidates who have passed the examination for the degree of Bachelor with Honours will be published in such form as to distinguish the Honours School in which severally they may have passed; the names of those who have passed in Honours being drawn up in three classes, and each class being arranged in alphabetical order.

7. Candidates who have not acquitted themselves so as to deserve Honours, but have reached the standard of the Ordinary degree, may be recommended for that degree.

8. Candidates who have passed the examination for the Ordinary degree of Bachelor of Science may (during the succeeding year or the two years immediately succeeding) proceed with the course of study in an Honours School.

9. No candidate for a degree of Bachelor of Science with Honours shall be admitted more than once to examination in the same Honours School, except under special conditions approved by the Senate ; but the course shall in no case exceed four years, except in cases of illness, when a medical certificate satisfactory to the Senate will be required.

10. Students who have passed the Final examination in any of the Honours Schools shall be admitted to the Final examination in any other Honours School after the expiration of one or two years, on presenting certificates of having attended, during the period in question, courses approved by the University, provided that in the said other Honours School selected candidates shall not present themselves for the Final examination more than two academic years after the Final examination in Honours already passed by them, and also that no candidate be admitted to examination in any Honours School after a longer period than five years has elapsed since the date of his first entrance upon a prescribed course of study for an Honours School.

### Honours Schools

11. Candidates who have passed the Second M.B. examination may, with the sanction of the Senate, and on furnishing certificates of having during the academical year following such Second M.B. examination attended the third year's, or during the two academical years following such Second M.B. examination of having attended the second and third year's course approved by the University for one of its Honours Schools in Science, present themselves for examination for a B.Sc. degree with Honours in such school.

# Prescribed Courses of Study

The following regulations apply to candidates who have Regulations. not passed the Intermediate examination before entering the University. Candidates who have already satisfied the requirements of that examination will be exempted from attendance at the Intermediate classes in the subjects in which they have passed. It should be noted that preparation for the additional Intermediate subject is not mentioned in the following schemes, as it may be taken at such time in the undergraduate course as is most convenient to the candidate.

Laboratory work will be required at each stage, except in Mathematics. The amount required in each subject will be prescribed by the Professor, with the sanction of the Board of Science and Technology.

In the following regulations the words *Intermediate course* or *examination* and *Final course* or *examination* indicate respectively the Intermediate and the Final courses or examinations for the Ordinary degree of Bachelor of Science.

#### Mathematics<sub>1</sub>

- Three years' course. First year: either Chemistry I, or Biology I, or Geology I, together with Mathematics V, VI, and VII, and Physics II. Second year: Mathematics VIII and IX, and Physics III and IV. Third year: Mathematics VIII and IX.
- Four years' course. First year: either Chemistry I, or Biology I, or Geology I, together with Physics II. Second year: Mathematics V, VI, and VII, and Physics III and IV. Third and fourth years: Mathematics VIII and IX.

 $<sup>^1</sup>$  The standard for the Honours degree in this subject may be taken as equivalent to two years' study beyond that required for the Ordinary degree.

#### Examination for Honours

Ten papers will be set on the following subjects :

PURE MATHEMATICS:

Pure Geometry, plane and solid Algebra Theory of Equations and Determinants Plane Trigonometry Spherical Trigonometry with simple applications to Astronomy Analytical Geometry of two and of three dimensions Elements of Projective Geometry Differential Calculus with applications to plane curves Integral Calculus Ordinary Differential Equations Partial Differential Equations of the first order Finite Differences.

**APPLIED MATHEMATICS:** 

Dynamics of a particle Statics Attractions Dynamics of rigid bodies Hydrostatics Elementary Hydrodynamics Elementary Theory of Sound.

#### Physics1

- Three years' course. First year: Physics II and III, Mathematics V, VI, and VII, and Chemistry I. Second year: Physics IV and V, and Mathematics VIII and IX. Third year: Physics VI.
- Four years' course. First year: Physics II, Chemistry I, and Mathematics V and VI. Second year: Physics III and IV, and Mathematics VI and VII. Third and fourth years: Physics V and VI.

#### Examination for Honours

Experimental and Theoretical Physics, requiring a knowledge of the Calculus, three papers.

One of the following :

Mathematical Physics, more advanced portions, one paper.

Physical Chemistry, one paper.

Technical Electricity, one paper.

Practical examination in the Physical laboratory extending over two days.

<sup>1</sup> The standard for the Honours degree in this subject may be taken as equivalent to two years study beyond that required for the Ordinary degree.

#### Honours Schools

#### Chemistry

Three years' course. First year: Chemistry II or III, Mathematics III, and Physics II. Second and third years: Chemistry II or III, IV, and V, together with either (1) Mathematics V and VI, and Physics III, or (2) Physics III and IV.

Four years' course. First year : Chemistry I, Mathematics III, and Physics II. Second and third years : Chemistry II, III, and IV, together with either (1) Mathematics V and VI, and Physics III, or (2) Physics III and IV. Fourth year : Chemistry V.

#### Examination for Honours

Inorganic Chemistry, one paper

Organic Chemistry, one paper

Physical Chemistry, one paper

History of Chemistry, one paper

One of the following subjects :

Electrochemistry, one paper

One of the following branches of Applied Chemistry : Colour Chemistry and Dyeing, one paper Chemistry of Leather Manufacture, one paper Agricultural Chemistry, one paper

Chemistry of Food and Drugs, one paper.

A branch of Physics, one paper

Mineralogy and Crystallography, one paper

Metallurgy, one paper

Mechanical Engineering, one paper.

Practical examination in the laboratory, extending over three days.

#### Zoology

- Three years' course. First year: Biology I, together with two of the following, namely, Mathematics III, Physics II, Chemistry I, Geology I. Second year: Biology III, (A and B), together with courses in one other principal subject or two subsidiary subjects. Third year: Honours work in Zoology.
- Four years' course. First year: Biology I, together with two of the following, namely, Mathematics III, Physics II, Chemistry I, Geology I. Second and third years: Biology III, (A and B), together with courses in one other principal subject or two subsidiary subjects. Fourth year: Honours work in Zoology.

# Degrees in Science

#### Examination for Honours

One or more of the subjects named below may be selected, or the candidate may propose other subjects for the approval of the Senate. The subjects must be sent in not later than the last day of the October preceding the examination. A summary of the course of study actually gone through must be sent in to the examiners during the following April.

<sup>'</sup>The Honours examination may be taken in the same year as the Ordinary B.Sc., or a year later. It will extend over three days, one of which will be occupied with practical work. There will be a *viva voce* examination.

A thesis, founded upon original research, may be sent in either alone, or together with one or more special subjects for examination.

Subjects, one or more of which may be selected for an Honours course in Zoology:

- (a) The comparative anatomy of some large and important group of animals.
- (b) Comparative embryology.
- (c) Palæontology, with special reference to some large and important group of animals.

#### Botany

- Three years' course. First year: Biology I, together with two of the following, namely, Mathematics III, Physics II, Chemistry I, Geology I. Second year: Biology IV (A and B) together with courses in one other principal subject or two subsidiary subjects. Third year: Honours work in Botany.
- Four years' course. First year: Biology I, together with two of the following, namely, Mathematics III, Physics II, Chemistry I, Geology I. Second and third years: Biology IV (A and B) together with courses in one other principal subject or two subsidiary subjects. Fourth year: Honours work in Botany.

#### Examination for Honours

One or more of the subjects named below may be selected, or the candidate may propose other subjects for the approval of the Senate. The subjects must be sent in not later than the last day of the October preceding the examination. A summary of the course of study actually gone through must be sent in to the examiners during the following April.

The Honours examination may be taken in the same year as the Ordinary B.Sc., or a year later. It will extend over three days, one (or more) of which will be occupied with practical work. There will be a *viva voce* examination.

A thesis, founded upon original research, may be sent in either alone, or together with one or more special subjects for examination.

Subjects, one or more of which may be selected for an Honours course in Botany :

(a) Special study of a selected group of plants

(b) Ecology of a selected group

(c) Geographical Distribution of Plants

(d) Fossil Botany.

#### Physiology

- Three years' course. First year: three of the following, namely: Mathematics III, Physics II, Chemistry I, Biology I, Geology I. Second year: Physiology I and II, together with two of the following, namely, (I) Physics III, (2) Chemistry II, or III, or IV, or V (C), (3) Zoology III (A or B), (4) Bacteriology I, one of which shall be either Physics or Chemistry. Third year: Honours work in Physiology.
- Four years' course. First year: three of the following, namely, Mathematics III, Physics II, Chemistry I, Biology I, Geology I. Second and third years: Physiology I and II, together with either (1) Physics III and IV, or (2) Chemistry II, III, IV, and V (C), or Zoology III (A and B). Fourth year: Honours work in Physiology.

As part of both the three years' and the four years' courses candidates will be required to have attended satisfactorily an approved course of instruction in Human Anatomy or in Comparative Anatomy.

Examination for Honours

Physiology, three papers Practical examination, extending over two days.

#### Geology

In this school there are alternative schemes of study, Scheme A—Physical, and Scheme B—Biological.

### Scheme A (Physical)

Three years' course. First year: Geology I, and two of the following, namely, Mathematics III, Physics II, Chemistry I, Biology I. Second and third years: Geology II, V, VI, and VII, with research, together with either (1) (a) Chemistry II or III, or (b) Chemistry IV, or (c) Chemistry V (C), and Physics III, or (2) Chemistry II, III, IV, and V (C).

Four years' course. First year: Geology I, and two of the following, namely, Mathematics III, Physics II, Chemistry I, Biology I. Second and third years: Geology II and V, Physics III, and either (1) Chemistry II or III, or (2) Chemistry IV, or (3) Chemistry V (C). Fourth year: Geology VI and VII, with research.

#### Examination for Honours

Geology, two papers Petrology, one paper Elementary Mineralogy, one paper A special paper on the subject of research selected by the candidate Practical examination, extending over two days.

# Scheme B (Biological)

- Three years' course. First year: Geology I and Biology I, together with either Mathematics III, or Physics II, or Chemistry I. Second year: Geology II and III, together with either (1) (a) Biology III (A and B), or (b) Biology IV (A and B), or (c) two of the following, namely (a) Chemistry II or III, or Chemistry IV, or Chemistry V (C), (b) Biology III (A) or III (B), (c) Biology IV (A) or IV (B). Third year: Geology VI, with research.
- Four years' course. First year: Geology I and Biology I, together with either Mathematics III, or Physics II, or Chemistry I. Second and third years: Geology II and III, together with either (1) (a) Biology III (A and B), or (b) Biology IV (A and B), or (2) two of the following, namely (a) Chemistry II or III, or Chemistry IV, or Chemistry V (C), (b) Biology III (A) or III (B), (c) Biology IV (A) or IV (B). Fourth year: Geology VI, with research.

#### Examination for Honours

Geology, one paper

Palæontology, one paper

Palæobotany, one paper

Special paper on the subject of research selected by the candidate Practical examination extending over two days.

#### Honours Schools

#### Mechanical Engineering

Three years' course. First year: Mathematics III and V, Physics II, Chemistry I, and Engineering I. Second year: Mathematics VI and VII, Engineering VI, and Electrical Engineering I. Third year: Physics III (second term only), Engineering IV (Part I) and VII.

#### Examination for Honours

Graphics and Descriptive Geometry, one paper Strength and Elasticity of Materials, one paper General Hydraulics, one paper Thermodynamics and Theory of Heat Engines, one paper Dynamics of Steam Engines and Machinery, one paper Mechanics and Kinematics, one paper

Pure Mathematics, one paper

Applied Mathematics, one paper.

Laboratory examination, two days.

A candidate's work done in the drawing office and the laboratory and the class examination results in Engineering during his three years' course will be taken into consideration.

### Civil Engineering

Three years' course. First year: Mathematics III and V, Physics II, Chemistry I, and Engineering I. Second year: Mathematics VI and VII, Geology I, and Engineering III and VI. Third year: Physics III (second term only), Engineering IV and VII.

#### Examination for Honours

Graphics and Descriptive Geometry, one paper Strength and Elasticity of Materials, one paper General Hydraulics, one paper Theory of Complex Structures, one paper Surveying and Descriptive Engineering, one paper Water Engineering, Tidal and Railway Construction, one paper Pure Mathematics, one paper Applied Mathematics, one paper. Laboratory examination, two days.

A candidate's work done in the drawing office and the laboratory, and the class examination results in Engineering during his three years' course will be taken into consideration.

#### Degrees in Science

#### Electrical Engineering

Three years' course. First year: Mathematics III and V, Physics II, Chemistry I, and Engineering I. Second year: Mathematics VII, Engineering VI, and Electrical Engineering I. Third year: Mathematics IV, Physics III (second term only), and Electrical Engineering II, III, and IV.

#### Examination for Honours.

Generation of Electrical Energy, one paper Transformation of Electrical Energy, one paper Distribution of Electrical Energy, one paper Design of Electrical Appliances, one paper Mechanical Engineering, one paper Heat Engines, one paper Pure Mathematics, one paper Applied Mathematics, one paper. Practical examination, two days.

#### Mining Engineering

Honours in this subject will be awarded to candidates who, having obtained the Ordinary degree, with Mining Engineering as a principal subject, and being recommended as suitable to proceed with an Honours course, shall have spent one year in research or in the preparation of a thesis, attendance at the University during this fourth year not being compulsory. All candidates for Honours shall pass the same Mathematical examinations as if they had taken Mathematics as a principal subject.

# Applied Chemistry : Colour Chemistry and Dyeing

Honours in this subject will be awarded to candidates who, having completed the four years' course of study for the Ordinary degree, with Colour Chemistry and Dyeing as a principal subject, shall have specially distinguished themselves in the Final examination.

#### Applied Chemistry: Chemistry of Leather Manufacture

Four years' course. First year: Chemistry I, together with two of the following, namely, Mathematics III, Physics II, Biology I. Second and third years: Physics III, Engineering II (A), Chemistry II, III, IV, and V (C), and Chemistry of Leather Manufacture I, II, III, IV, and V. Fourth year: Honours courses or research in Chemistry of Leather Manufacture.

#### Honours Schools

#### Examination for Honours

Physics and Chemistry of Leather Manufacture, one paper. Methods of Leather Manufacture, one paper. Laboratory Methods, one paper. Practical examination, three days.

#### Agriculture

Four years' course. First year: Three of the following, namely, Physics II, Chemistry I, Biology I, Geology I. Second and third years: the courses prescribed for candidates for the Final examination for the Ordinary degree who offer Agriculture as a principal subject, together with research work. Fourth year: Honours work, with research. Candidates are required to present themselves at the end of the third year for the final examination for the Ordinary degree.

The same rule shall apply to an Honours student as to a student reading for an Ordinary degree, viz., six months shall be spent at the Manor Farm, Garforth, after the Intermediate examination and before the completion of the third year. At the examination at the end of the third year the candidate for the Ordinary degree will be required to submit a report on an experiment he has himself conducted. The candidate for Honours will be required to submit an interim report on his special research.

#### Examination for Honours

The examination will extend over two days, part of the time being occupied by a *viva voce* examination at the Manor Farm, Garforth.

### DEGREE OF MASTER OF SCIENCE<sup>1</sup> I

1. The degree of Master of Science is conferred, on payment of the proper fee, upon registered Bachelors of Ordinance Science, when of three years' standing from the date of their graduation as Bachelors, subject to the conditions contained in the following paragraphs.<sup>2</sup>

2. Bachelors of Science who have graduated with Honours are not required to present themselves for any further examination for the degree of Master of Science.

<sup>1</sup> In 1907 notice must be given and the fee must be paid not later than March 1. The examination held under I 3 will begin on Monday, June 10. 2 See Ordinance XI, page 70.

3. Bachelors of Science who have obtained the Ordinary degree are required to satisfy the Examiners in a further examination in *one* of the following subjects : Mathematics, Physics, Chemistry, Zoology, Botany, Physiology, Geology, Mechanical, Civil, Electrical, or Mining Engineering, Applied Chemistry (Colour Chemistry and Dyeing), Applied Chemistry (Chemistry of Leather Manufacture), and Agriculture. Certificates of attendance are not required.

4. The names of candidates who have passed the further examination for the degree of Master of Science are arranged in alphabetical order without distinction of classes.

5. Candidates who have prosecuted research, and who give satisfactory evidence thereof by the presentation of a thesis, may be excused part of the examination.

Π

Graduates or persons who have passed the Final examination for a degree of other approved Universities shall, if they present evidence satisfactory to the Senate 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 M.Sc., without taking the B.Sc. degree, after not less than two years of such advanced study or research. Such candidates shall be required to give evidence to the Senate at the end of the first year of their period of study that their work has been satisfactory, and at the end of their second year they shall be required to present a dissertation, and to satisfy such further test, if any, as the Senate shall deem expedient.

#### Examination

Regulations MATHEMATICS:

Analytical Geometry, Plane and Solid Differential and Integral Calculus Dynamics and Statics of a Particle Hydrostatics and Rigid Dynamics.

**PHYSICS**:

Experimental Physics, including Chemical Physics, two papers Experimental and Theoretical Physics requiring a knowledge of the Differential Calculus and of the elements of the Integral Calculus, one paper

Practical examination, one day.

Degree of M.Sc.

CHEMISTRY:

Inorganic Chemistry, one paper

Organic Chemistry, one paper

One of the following :

History of Chemistry and of Chemical Philosophy, one paper Physical Chemistry, one paper

Mineralogy and Crystallography, one paper

Technological Chemistry, one paper

Metallurgy, one paper

Sanitary Chemistry, one paper

Physiological Chemistry, one paper

Chemical Physics treated experimentally, one paper

Practical examination, one day.

ZOOLOGY:

Zoology and Comparative Anatomy (including the more important extinct forms) and Embryology, two papers

Practical examination, one day.

#### BOTANY :

Botany, two papers Practical examination, one day.

**PHYSIOLOGY**:

Animal Physiology, three papers Practical examination, one day.

GEOLOGY :

*Either* Geology and the elements of Mineralogy, three papers, or Geology and Zoology, three papers Practical examination, one day.

MECHANICAL ENGINEERING: Dynamics of Machinery Stress, Strain and Elasticity Heat Engines and Thermodynamics Hydraulics.

CIVIL ENGINEERING : Surveying and Descriptive Engineering Stress, Strain and Elasticity Complex Structures Hydraulics.

ELECTRICAL ENGINEERING: Details to be considered.

MINING ENGINEERING : Details to be considered.

APPLIED CHEMISTRY (Colour Chemistry and Dyeing): Details to be considered.

APPLIED CHEMISTRY (Chemistry of Leather Manufacture) : Details to be considered.

AGRICULTURE : Details to be considered.

## Degrees in Science

## DEGREE OF DOCTOR OF SCIENCE

Ordinance.

1. The degree of Doctor of Science is conferred by the University upon registered Masters of Science 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 the Faculties, also require candidates to pass such an examination as it may from time to time determine.

2. A Master of Science of the University may make application<sup>1</sup> for the degree of Doctor of Science in the sixth, or any subsequent year from the date of his admission to the Bachelor's degree.<sup>2</sup>

3. 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 memoir, whether in type or in manuscript, which the applicant may desire to submit in support of the application.

4. If the application be approved by the Senate, the degree may be conferred at the expiration of not less than six years from the date of admission to the Bachelor's degree.

# DIPLOMAS IN SCIENCE AND TECHNOLOGY.

Diplomas are granted by the University in the following subjects :

Coal Mining Dyeing Civil Engineering Electrical Engineering

Mechanical Engineering

Leather Manufacture

Textile Industries: (1) Textile Design and Cloth Finishing; (2) Woollen and Worsted Spinning; (3) Textile Manufacturing.

1 In 1907 application must be made not later than March 1.

<sup>2</sup> See Ordinance XI, page 79.

For general regulations affecting the award of Diplomas, see page 159.

For regulations affecting each several diploma, see particulars of courses of study under the heading of the department concerned.

# OTHER TECHNOLOGICAL EXAMINATIONS

The examinations of the City and Guilds of London Technical Institute are held in the University in April, May, or June every year. Students of the University and others are admitted to the examinations. Each candidate is required, when entering his name for the examination with the Local Secretary, to pay to the City and Guilds Institute a fee of 1s. for each subject in which he desires to be examined. In some few subjects a higher fee is charged. Money prizes, medals, and certificates are awarded by the Institute. Among the subjects of examination, the following may be mentioned as specially suitable to the technical students of the University :-- Coal Tar Products, Gas Manufacture, Iron and Steel Manufacture, Leather Tanning, Dyeing (Silk, Wool, and Cotton), Bleaching and Printing, Textile Fabrics (Spinning and Weaving), Electrical Engineering, Mechanical Engineering, Mine Surveying. To obtain a full certificate in any of the above-mentioned technological subjects candidates will be required to pass the Institute's examination in the Honours grade and also, in general, an examination in one or more of the Science and Art subjects included in the Regulations of the Board of Education, the subjects to be chosen from those most closely allied to the subject taken by the candidate. The Institute will accept in lieu of the examination by the Board of Education a certificate from the University stating that the candidate has attended approved courses of instruction at the University in the science subjects allied to the technological subject in which the full certificate is claimed, and has passed a satisfactory examination in such science subject. Candidates will also be qualified for the full technological certificate who pass the Preliminary examination as well as the Ordinary and Honours examinations (written and practical) in any technological subject for which such a full course is provided by the Institute. For further particulars see the programme of the Institute (price, post free, 1s.).

Entries for the next examination will be received by the Local Secretary, Mr. G. R. Brench, University of Leeds, not later than Monday, March 4, 1907. The examination will begin on April 20, 1907.

### Courses in Science

## MATHEMATICS

Professor Rogers Mr. Watson

### I. Matriculation Course

Mondays, Wednesdays, and Fridays, at 2 p.m.

The subjects are elementary geometry, algebra, and arithmetic, as required for the Matriculation examination. Books will be recommended by the Professor.

Fee, £3 135. 6d.

### II. First Year Course for Engineers

Mondays, Wednesdays, and Fridays, at 3 p.m.

This course will treat of algebra, elementary trigonometry, and other subjects useful to engineering students.

Fee, £3 135. 6d.

### III. Intermediate Course in Pure Mathematics

Mondays, Wednesdays, and Fridays, at 2 p.m.

Students reading for the Intermediate B.Sc. examination attend for all three hours; students reading for the Intermediate B.A. examination attend on Mondays and Wednesdays only.

Fee for three hours a week,  $\pounds_3$  13s. 6d.; for two hours,  $\pounds_2$  12s. 6d.

Books recommended

Hobson and Jessop, *Elementary Trigonometry* (Cambridge) Knott, *Four-figure Mathematical Tables* (Chambers, 4d.) Gibson, *Introduction to the Calculus* (Macmillan, 3s. 6d.)

#### IV. Second Year Course for Engineers

Mondays, Wednesdays, and Fridays, at 9.30 a.m.

The subjects are elementary co-ordinate geometry, differential and integral calculus.

Fee, £,3 13s. 6d.

Book recommended

Gibson, Introduction to the Calculus (Macmillan, 3s. 6d.)

V. Final Course in Applied Mathematics (First Year) Mondays, Wednesdays, and Fridays, at 4 p.m. Elementary statics, dynamics, and hydrostatics. Fee,  $\pounds$ , 3 135. 6d.

Book recommended Jessop, Elements of Applied Mathematics (Bell, 4s. 6d.)

#### VI. Final Course in Pure Mathematics

Mondays, Wednesdays, and Fridays, at 11.30 a.m. Subjects: co-ordinate geometry, differential and integral calculus.

Fee, £3 135. 6d.

Books recommended Lamb, Infinitesimal Calculus (Cambridge) Smith, Conic Sections (Macmillan)

#### VII. Final Course in Applied Mathematics (Second Year)

Mondays, Wednesdays, and Fridays, at 9.30 a.m.

Subjects: statics, dynamics, and hydrostatics. Books will be recommended by the Professor.

Fee, £3 138. 6d.

### VIII., IX. Honours Courses in Pure and Applied Mathematics

Courses of lectures of three hours a week each in Pure and Applied Mathematics will be delivered to students reading for Honours in Mathematics. Hours of meeting will be arranged.

Fee for each course,  $\pounds_3$  135. 6d.

## PHYSICS<sup>1</sup>

### Chair endowed in 1884 by public subscription in memory of the late Lord Frederick Cavendish, first President of the Yorkshire College

Professor Stroud Mr. Allen Mr. Shorter Mr. Carlton

### LECTURE COURSES

## I. Matriculation Course, Elementary Mechanics

Experimental Lectures : Tuesdays and Thursdays, at 9.30 a.m., throughout the session.

<sup>1</sup> Candidates for the First examination in Medicine, or the Intermediate Science or Preliminary Scientific (M. B.), London, should refer to the course given on page 287.

Exercise Class : Saturdays, at 9.30 a.m., throughout the session.

This course will embrace the subject of Mechanics, and is framed to meet the requirements of candidates for the Matriculation examination.

The subjects will be as follows: properties of matter, composition and resolution of forces, the simple machines, the balance, centre of gravity, friction, laws of motion, falling bodies, laws of fluid pressure, specific gravity, Boyle's law, the barometer, the air pump, the siphon.

Fees for the whole course,  $\pounds_3$  135. 6d.; for the experimental lectures only,  $\pounds_2$  125. 6d.; for the exercise class only,  $\pounds_1$  5s.

Book recommended Pinkerton's Mechanics and Hydrostatics (Blackie & Son, 3s. 6d.).

#### II. Intermediate Course

Experimental Lectures: Wednesdays and Fridays at 3 p.m., or Wednesdays and Fridays at 4 p.m.

Exercise Class: Mondays at 3 p.m., or Thursdays at 9.30 a.m., throughout the session. Students taking the whole course will therefore attend either on Mondays, Wednesdays, and Fridays at 3 p.m., or on Wednesdays and Fridays at 4 p.m., and Thursdays at 9.30 a.m.

This course will be divided into two parts :

Part I will consist of experimental lectures describing and exhibiting the chief phenomena of Electricity and Magnetism.

Part II will treat of *Mechanics*—Work, centrifugal force, the pendulum, elasticity; *Heat*—Temperature, expansion, change of state, relations of heat and work, mechanical equivalent of heat; *Acoustics*—Nature of sound, wave motion, velocity of sound, musical intervals, vibrations of rods and strings; *Light*—Velocity of light, methods of measuring the intensity of light, the spectrum, reflection and refraction at spherical surfaces, achromatism.

Fees for the whole course, the same as for the first year course; for Parts I or II only,  $\pounds 2$  2s.; for the experimental lectures of Parts I or II only,  $\pounds 1$  115. 6d.

Books recommended

Part I. S. P. Thompson, *Electricity and Magnetism* (Macmillan, 4s. 6d.)

Jones, Examples in Physics (Macmillan, 3s. 6d.) Part II. Jones, Sound, Light, and Heat (Macmillan)

### III. Final Course (Subsidiary)

Lectures : Mondays and Fridays, at 10.30 a.m., throughout the session.

This course is designed to meet the requirements of students taking Physics as a subsidiary subject in the Final B.Sc. examination. It also forms the first half of the course for students taking Physics as a principal subject in that examination.

Fee, £, 2 125. 6d.

Book recommended

Watson, Physics (Longmans 10s. 6d.)

The following works may also be usefully consulted :

Poynting & Thomson, Properties of Matter, Heat, and Sound Edser, Heat and Light

Hadley, Electricity and Magnetism

### IV. Final Course (Principal)

Lectures : Wednesdays, at 10.30 a.m., throughout the session, and at some other hour to be arranged when the class meets.

This course, in addition to III above, is designed to meet the requirements of students taking Physics as a principal subject in the B.Sc. examination. Students taking this course are required to have previously gained at least a second class in each terminal examination in Course III, or in default are required to take Course III again concurrently with this course, unless specially exempted by the Senate.

Fee, £, 2 125. 6d.

Fee for courses III. and IV. taken together,  $f_{4}$  14s. 6d.

#### V, VI. Honours Course

Three lectures a week throughout the session, at times to be arranged.

This will form a continuation of the previous course, and will treat the subject mainly from the mathematical standpoint. It is designed to meet the requirements of candidates for Honours in Physics. The complete course extends over two sessions.

230

Fee,  $\pounds$ , 3 13s. 6d. per session.

N.B.—The class will meet for the first time on Thursday, October 4, at 2 p.m., when times will be arranged for the lectures to suit the convenience of students attending the class.

## PHYSICAL LABORATORY

The Physical laboratory will be open from 9.30 a.m to  $\tau$  p.m., and from 2 to 5 p.m. (except on Saturdays) for instruction in the methods of performing physical experiments.

Students preparing for the Intermediate B.Sc. examinations or for the First examination in Medicine will require to devote at least three hours per week throughout the session to practical work.

A student preparing for the Final B.Sc. examination with Physics as a principal subject is required to devote one day per week for two sessions to practical work.

A student taking Physics as a subsidiary subject is required to devote one day per week for one session to practical work.

The laboratory will be open for the different classes of work according to the following table:

	9.30—12.30.	2—5.
М.	Honours.	Final.
Tu.	Final.	Intermediate.
W.	Honours.	Final.
Th.	Final.	Intermediate.
F.	Honours.	Final.
S.	Intermediate.	

Book recommended for Intermediate Course: Schuster & Lee's Intermediate Physics (Macmillan).

For fees, see page 118.

### General Elementary Science

This class, which is intended for teachers, will meet on Saturdays from 9.30 a.m. to 12.30 p.m., for half the session. It will be divided into two sections, viz.:

I. For those who are new to the study of Science.

2. For those who have taken Science courses.

Section 1 will meet from the beginning of the session to the middle of the second term.

Section 2, from the middle of the second term to the end of the session.

The classes will be co-ordinate with classes in the department of Chemistry. (See p. 236.)

Fee, £2 125. 6d.

## CHEMISTRY<sup>1</sup>

Professor Smithells Professor Cohen Dr. Dawson Mr. Lowson Mr. Whiteley Mr. Perkins

### LECTURE COURSES

### I. General Course of Chemistry

The lectures of this course are given throughout the session, on Mondays, Wednesdays, and Fridays, at 11.30 a.m. In addition a tutorial class will be held one hour weekly throughout the session.

The course is divided into two parts :

Part I will comprise lectures on the general properties of matter; chemical combination and decomposition; preparation, classification, and chemical behaviour of the chief elements and their compounds; chemical theory treated in an elementary manner.

Part II (third term) will form an introduction to organic chemistry.

Fees for the whole course (including tutorial class),  $\pounds_4$  4s.; for part I,  $\pounds_3$  13s. 6d.; for part II,  $\pounds_1$  1s.

r Candidates for the First examination in Medicine, or the Intermediate Science or Preliminary Scientific (M.B.), London, should refer to the course given on page 287.

### Chemistry

### II. Inorganic Chemistry 1

### Advanced Course-Metals

Mondays, Wednesdays, and Fridays, at 9.30 a.m., throughout the session.

This class will deal chiefly with the metals and their compounds. A previous general knowledge of chemistry is necessary.

Fee, £3 138. 6d.

#### III. Inorganic Chemistry

#### Advanced Course-Non-Metals

Tuesdays, Thursdays, and Saturdays, at 9.30 a.m., throughout the session.

This class will deal chiefly with the chemistry of the non-metallic elements. A previous general knowledge of chemistry is necessary.

Fee, £3 138. 6d.

### IV. Organic Chemistry

Tuesdays, Thursdays, and Saturdays, at 12 (noon), throughout the session.

This course is intended for second year students, or for those who have already some knowledge of chemistry.

Fee, £, 3 135. 6d.

### V. Honours Courses

#### A. Organic Chemistry

### Professor Cohen

Mondays, Wednesdays, and Fridays, at 12 (noon), during the first and second terms.

Fee, £,2 125. 6d.

### B. History of Chemistry

### Professor COHEN

Mondays, Wednesdays, and Fridays at 9.30 a.m., during the first term.

Fee, £, 1 115. 6d.

I t will be advisable, as a rule, for students to take course II before course III, but this order is not essential.

#### C. Physical Chemistry

Dr. DAWSON

Mondays, Wednesdays, and Fridays, at 9.30 a.m. during the second and third terms.

Fee, £ 2 125. 6d.

#### D. Electro-Chemistry

Dr. DAWSON

Tuesdays at 9.30 a.m. Fee,  $\pounds_1$  115. 6d.

### VI. Chemistry of Food and Drugs

During the third term a special class will be held for those students who are taking the Final examination of the Institute of Chemistry in Branch E (Food and Drugs).

Fee, £, 2 25.

### PRACTICAL CHEMISTRY

#### I. General Laboratory Courses

The object of the laboratory courses is to enable the student to obtain a practical acquaintance with chemical science, so as to fit him to conduct chemical analysis, to make original investigations in Chemistry, and generally to become qualified to apply the science to the arts and manufactures. It is necessary that each laboratory student should attend or should have attended the General or the Advanced courses in Chemistry and the course in Organic Chemistry.

In the Chemical laboratories instruction is given in the general modes of preparing chemical compounds, inorganic and organic, in the qualitative and quantitative analysis of minerals and commercial products, in water analysis, gas analysis, and in the various branches of physical chemistry. It is necessary, however, that students wishing to pursue any special branch of practical work shall first have thorough training in the general principles and method of chemical manipulation and analysis.

Each student will be furnished with a separate working table, a set of re-agents, water and gas, and will be required to provide himself with a regulation set of

### Chemistry

apparatus on entry,<sup>1</sup> and also, if necessary, a few of the more costly tests, and any expensive materials which he may need for the purposes of original investigation. Apparatus of a special or expensive character may be obtained on loan, subject to such conditions as may be prescribed by the Professor.

For fees see page

Students taking the course for the First examination in Medicine or the Preliminary Scientific (M.B.) of the University of London, must attend at the hours specified on page 287.

#### 2. Practical Course in Sanitary Chemistry

This course is arranged on the lines laid down by the General Medical Council and to suit the requirements of Medical Officers of Health.

The course will be held during the third term of the session on Tuesdays and Thursdays, from 2 to 5 p.m.,<sup>2</sup> and will include practical instruction or demonstrations in the sanitary examination of water, air and food, and on the properties of gases, the laws of heat and the use of meteorological instruments.

Instruction will be given in :

*Water.*—Qualitative examination, quantitative examination, estimation of free and albuminoid ammonia, oxygen consumption, chlorine, nitrates and nitrites, total solids, temporary and permanent hardness, metallic impurities.

*Air.*—Qualitative examination of foreign gases, quantitative determination of carbon dioxide, sulphur dioxide and dust.

*Food.*—Qualitative or quantitative examination of milk, butter, tea, coffee, sugar, alcoholic beverages.

The Properties of Gases.—Expansion, weight, pressure, diffusion, ventilation.

The Laws of Heat.—Expansion of liquids and solids, temperature, latent and specific heat, liquefaction, evaporation, ebullition, radiant heat.

<sup>1</sup> For the convenience of students, a supply of apparatus is kept at the University, and may be purchased from the laboratory steward.

<sup>2</sup> These hours are subject to re-arrangement.

### Courses in Science

The Use of Meteorological Instruments.—Thermometers (wet and dry bulb), barometers, hygrometers, anemometers, analysis of weather reports and meteorological charts.

Fee, £ 5 5s.

### 3. General Elementary Science

This class, which is intended for teachers, will meet on Saturdays from 9.30 a.m. to 12.30 p.m. for half the session. It will be divided into two sections, viz. :

1. For those who are new to the study of Science.

2. For those who have taken Science courses.

Section  $\tau$  will meet from the middle of the second term to the end of the session.

Section 2, from the beginning of the session to the middle of the second term.

The classes will be co-ordinate with classes in the Physical Department. (See p. 232.)

Fee, £ 2 125. 6d.

### APPLIED CHEMISTRY

The following course of instruction is recommended to students who intend to devote themselves to Applied Chemistry :

First Year :

Chemistry Lectures : General Course or Advanced Course II.

Chemical Laboratory, 3 days per week.

Mathematics III.

Physics II.

French or German.

Fee for the First Year Course (including Entrance fee of  $\pounds 1$  1s. and Union fee of 10s. 6d.), with General Chemistry,  $\pounds 28$  18s. 6d.; with Advanced,  $\pounds 28$  9s.

Second Year:

Chemistry Lectures : II, III and IV.

Chemical Laboratory, 3 days per week.

Physics III.

French or German.

Fee for the Second Year Course (including Union fee),  $\pounds_{30}$  145. 6d.

Third Year:

Chemistry Lectures : Honours Courses A, C and D. Chemical Laboratory, 3 days per week.

Physical Laboratory, I day per week.

One of the following: Elementary Engineering, Metallurgy, Geology.

Fee for the Third Year Course (including Union fee), about  $\pounds_{30}$ .

### INSTITUTE OF CHEMISTRY

Students desirous of obtaining the Associateship of the Institute of Chemistry are required to pass an approved preliminary examination, such as the Matriculation examination (including Latin and French *or* German), and further to attend :

- 1. A course of study during three years in practical and theoretical Inorganic and Organic Chemistry, the practical work to occupy at least fifteen hours per week.
- 2. At least fifty lectures in Physics, with at least 100 hours in the Physical laboratory.
- 3. A course in Mathematics up to the standard of the Intermediate examination for the degree of Bachelor of Science.
- A course of instruction in *one* of the following optional subjects: (a) Advanced Mathematics, (b) General Chemical Engineering, (c) Metallurgy, (d) Geology and Mineralogy, (e) Elementary Physiology, (f) Bacteriology.

The above course in Applied Chemistry is recommended as a convenient arrangement of subjects. For fuller details the Regulations of the Institute<sup>1</sup> should be consulted.

<sup>1</sup> To be obtained from the Secretary, Institute of Chemistry, 30, Bloomsbury Square, London, W.C.

Courses in Science

## BIOLOGY

Professor MIALL

### Dr. Smith

Mr. TAYLOR MR WALKER

Mr. UNWIN

### I. Intermediate Course : Elementary Biology

### A. Zoology 1

Lectures on Mondays, Wednesdays and Fridays during the first term, and on Mondays and Wednesdays during the second term, at 10.30 a.m. Demonstrations and Laboratory work on Mondays, from 2 to 5 p.m., and Tuesdays, from 9.30 a.m. to 12.30 p.m., during the first term, and on Mondays, from 2 to 5 p.m., during the second term.

The course includes :

The elementary study of the Rabbit (omitting the reproductive organs), Frog, Dogfish (omitting the renal and reproductive organs), Earthworm, Hydra, Paramecium, Vorticella, Amœba.

The development of the Chick up to the fourth day. The microscopic study of epithelia and blood.

#### Books recommended

Marshall, The Frog (Cornish, 3s. 6d.)

Marshall & Hurst, Practical Zoology (Smith, Elder & Co., 10s. 6d.)

Fee,  $\pounds_5$  5s. (including laboratory practice).

Each student is required to provide himself with a microscope, a pocket lens, a dissecting case (a suitable case is made for Reynolds & Branson, Leeds, and sold at 13s. 6d.), a biological drawing book (Jackson, Leeds, 1s.), two razors and a strop.

Any of the following microscopes will suffice for the biological work. The Professor of Physiology recommends students who intend to take Practical Physiology in a later part of their course to procure one of the first three.

238

<sup>&</sup>lt;sup>1</sup> This course will prepare for the examination of the University in Elementary Biology (see Time-table on page 287). It is recognised by the Royal College of Surgeons as meeting its requirements in Comparative Anatomy.

### Biology

I. Swift's College Stand, with Zeiss D objective in place of  $\frac{1}{4}$  in.,  $\frac{1}{2}$ 6 105.

2. Swift's College Stand, with Zeiss DD in place of  $\frac{1}{4}$  in.,  $\pounds_{7}$  25.

3. Leitz' Stand, II.b, with objectives 3 and 7,  $\pounds 6$  5s.

4. Swift's College Stand, with Swift's 1 in. and  $\frac{1}{6}$  objectives,  $\pounds_{5} 5$  5s.

Every microscope should be fitted with a ruled circle in the eyepiece for drawing. Messrs. Reynolds & Branson will supply such a circle for 7s. 6d., or 6s. 6d. when included with a microscope.

### Revision Class

A Revision Class in Zoology will be held in the third term, meeting on Thursdays at 11.30 a.m. Practical work on Fridays from 9.30 to 11.30 a.m.

Fee, £, 1 1s.

### B. Botany<sup>1</sup>

Lectures on Fridays at 10.30 a.m., during the second term, and on Mondays and Wednesdays at 9.30 a.m., Tuesdays and Thursdays at 2 p.m., during the third term. Demonstrations and laboratory work on Tuesdays from 9.30 a.m. to 12.30 p.m., during the second term, and on Mondays and Wednesdays, 10.30 to 11.30 a.m., Tuesdays and Thursdays, from 3 to 5 p.m., during the third term. Also, for candidates taking the London Intermediate Science examination, at times to be arranged, during the third term.

The course includes :

The elementary study of Chlamydomonas, Pleurococcus, Ulothrix, Spirogyra, Vaucheria, Bacteria, Saccharomyces, Eurotium, Pteris, Aspidium, and the flowering plant.

The elements of plant anatomy and plant physiology.

The classification and adaptations of flowering plants, as illustrated by examples of Ranunculaceae, Cruciferae, Caryophylleae, Leguminosae, Rosaceae, Umbelliferae, Primulaceae, Labiatae, Compositae, Liliaceae, Amaryllideae. Fee,  $\pounds$ , 5 55. (including laboratory practice).

Books recommended Scott, Structural Botany, Parts I and II (Black, 7s. . Simpson, Families of British Flowering Plants (Jackson, Is.).

<sup>&</sup>lt;sup>1</sup> This course will prepare for the examination of the University in Elementary Biology (see Time table on page 287).

## Courses in Science

#### II. Medical Biology

During the first term the lectures will be given on Mondays, Wednesdays and Fridays at 10.30 a.m.; demonstrations and laboratory work on Mondays from 2 to 5 p.m., and Tuesdays from 9.30 a.m. to 12.30 p.m. During the second term the lectures will be given as above; laboratory work on Tuesdays from 10.30 a.m. to 12.30 p.m., and Fridays, from 2 to 4 p.m.

Fee,  $\pounds_5$  5s. (including laboratory practice).

Subjects and books as for Elementary Biology, A. Zoology (above).

## III. Final Course: Zoology

Lectures three times a week, at hours to be arranged with the class.

Courses A and B will be taken alternately, each occupying one session. Either will rank as a subsidiary course for the degree.

A. The structure and life-history of selected animals; about half the classes of the animal kingdom; the development of selected animals; extinct vertebrates and mollusks; the freshwater fauna.

B. The structure and life-history of selected animals (a different selection from those in course A); the remaining classes of the animal kingdom; the development of selected animals; a few remarkable extinct invertebrates; the geographical distribution of animals in connection with the physical history of the continents.

Fee for each session,  $\pounds 5$  5s.

Courses of laboratory work, occupying from nine to twelve hours per week, at the choice of the student, will be provided in connection with these courses of lectures. For fees, see scale of laboratory fees on page 118.

The two years' course will prepare for the Zoology of the Final B.Sc. examination.

### IV. Final Course : Botany

Lectures on Mondays, Wednesdays and Fridays throughout the session. Courses A and B will be taken alternately, each occupying one session. Either will rank as a subsidiary course for the degree.

### Biology

- A. Algæ and Bryophyta : classification, and life-histories of representative groups.
  - Gymnosperms: morphology, anatomy and classification of principal groups; distribution in space and time.

Important natural orders of flowering plants.

Physiology of nutrition and œcology of the leaf.

B. Fungi : classification, and life-histories of representative groups.

Pteridophyta : structure and relationships of the principal groups (ferns, lycopods, etc.).

- Angiosperms: the morphology of the flower, and physiology of reproduction. The principles of geographical distribution, and œcology.
- Physiology of the plant axis; growth and response to stimulation.

Fee for each session,  $\pm, 5$  5s.

A course of laboratory work on one of the above courses will be provided; for fees see page 118.

The two years' course will prepare for the Botany of the Final B.Sc. examination.

#### V. Economic Entomology

Lectures and laboratory work, on Thursdays at 11.30 a.m., and on Fridays from 9.30 to 11.30 a.m. during the first term. The course will commence on October 18.

The structure and classification of insects will be treated in an elementary way, and the life-history of certain types will be followed out. It is expected that attention to the work of the class will qualify any student to read with advantage special memoirs on injurious insects.

Special arrangements will be made for the benefit of students desirous of taking a fuller course of instruction in Economic Entomology, either for teaching purposes or to qualify for appointments.

Fee, £1 115. 6d.

#### Book recommended

Miall, Injurious and Useful Insects (Bell & Sons, 3s. 6d.)

### Courses in Science

#### VI. Biological Laboratory

The Biological laboratory will be open daily from 9.30 a.m. to 5 p.m. (Saturdays, 9.30 to 12.30).

For fees see page 118.

Each laboratory student, or student taking a practical class in Biology, will be required to use his own microscope and dissecting instruments. Microscopes may be had on loan from the University at the rate of 2s. 6d. each per term, to be paid in advance. The regulations hung up in the Biological laboratory are to be observed by all students in this department.

### VII. Natural History for Agricultural Students

Lectures and laboratory work on Mondays, 10.30 a.m. to 12.30 p.m.; Wednesdays at 11.30 a.m.; Fridays, 9.30 to 11.30 a.m. during the first and second terms, commencing October 17.

Subjects: Elementary facts of structure of plants and animals; drawing; the use of the microscope; simple experiments on the growth of plants and allied matters; the elements of Agricultural Botany.

Fee, £,2 125. 6d.

#### VIII. Botany for Agricultural Students

### (Second year of Agricultural Course)

Mondays and Wednesdays, from 2 to 4 p.m., and Fridays, at 2 p.m., during the first and second terms.

Subjects: Structure and nutrition of plants; the elements of systematic Botany; diseases of crops caused by fungi.

Laboratory work to accompany the lectures, with special work on identification of grasses and other crop-plants, common weeds, and diseases of plants.

This course will prepare for the National Diploma examination.

Fee, £,3 35.

### IX. Forestry

Lectures and laboratory work, Mondays and Wednesdays 9.30 to 11.30 a.m., during the third term.

Occasional excursions will be made during the term students to pay their own railway fares or other expenses, Subjects: (1) Forest Botany; the structure and growth of trees and timber.

(2) General Forestry; trees in relation to soil and climate; the growth of trees in the open and in forests; formation and regeneration of woods and plantations; pure and mixed woods; general management of trees.

Laboratory work includes identification of important trees and timbers, and common diseases of trees.

Fee, £,2 125. 6d.

### X. Nature Knowledge

### Professor MIALL

The class will meet on Saturdays from 9.30 a.m. to 12.30 p.m., beginning October 6, and will extend throughout the session.

Natural objects will be studied in the laboratory, and afterwards discussed in the class-room.

Fee, £3 13s. 6d.

## XI. Experimental Plant Physiology

### Mr. WALKER

This class will be held at the Manor Farm, Garforth, on Saturday mornings and afternoons throughout the session. It is intended for teachers of Horticulture, and is held in connection with a two years' course in Horticulture.

Fee for the two courses,  $\pounds_1$  125. 6d.

## PHYSIOLOGY

Professor BIRCH

Mr. CLARK

For courses in this Department see page 318.

## GEOLOGY

Professor Kendall Dr. Dwerryhouse

### I. Intermediate Course

Subjects : General and Stratigraphical Geology, and Geology in relation to the study of Geography.

Lectures three hours a week throughout the session at times to be arranged.

The course will also include practical work.

Fee for the lectures,  $\pounds_3$  13s. 6d.

#### II. Final Course in Geology

Mondays, Wednesdays, and Fridays throughout the session, at 2 p.m.

Subjects: The scope of Geology; the crust of the earth; the common rock-forming minerals; classification of rocks according to their mode of origin; aqueous rocks; denudation, transport, and accumulation of rocks; chemical action; forms of stratification; jointing and concretionary structures; igneous rocks; volcanoes and earthquakes; the condition of the interior of the earth; metamorphic rocks and metamorphism; slaty cleavage; mountain-building; the elements of Stratigraphical Geology and Palæontology; the application of Geology to Civil Engineering.

Fee, £3 138. 6d.

## III, IV, V. Final Courses in Palæontology, Applied Geology, Petrology

These courses will prepare for the Final B.Sc. (Ordinary). Each will consist of two lectures and not less than two hours' practical work a week during the session.

Lecture fee,  $\pounds$  2 12s. 6d. for each course.

### VI. Honours Course in Geology

A course of not less than 90 lectures will be given at hours to be arranged with the students.

Fee, £,3 135. 6d.

#### VII. Honours Course in Mineralogy

A course of 30 lectures and demonstrations will be given for students reading for Honours Geology (Scheme A).

Fee, £1 115. 6d.

#### VIII. Mineralogy for Mining Course

A course of 60 lectures with practical work will be given during the session for students taking the Mining course, and will include the following subjects, viz. : Principles of Crystallography

Physical properties of Minerals

Descriptive and Determinative Mineralogy

Modes of occurrence and association of Minerals and

Ores, with special reference to Metalliferous Mining.

Lectures on Wednesdays and Fridays, at 11.30 a.m. Lecture fee,  $f_{,2}$  12s. 6d.

#### IX. Agricultural Geology

A course of about 60 lectures will be given on Mondays Wednesdays, and Fridays, during the first and second terms, at 11.30 a.m., commencing October 17. Practical work, Tuesdays, from 2 to 4 p.m.

Subjects: Scope of the science; the composition and physical characters of the common rock-forming minerals; classification of rocks according to (a) their mode of origin and (b) chemical composition; denudation, transport and accumulation; forms of stratification; the subdivision of stratified rocks; economic products of the chief formations; the nature and origin of the drift deposits; their importance in relation to the soils of the North of England; the soils of the Warp lands and the Yorkshire Wolds; the disintegration of rocks and the formation of soils; geological maps, their interpretation and use; British rainfall, its measurement and variation; storage of subterranean waters; water supply from springs and deep and shallow wells; application of geological knowledge to the selection of sites for roads, bridges, &c.

Fee, £,2 125. 6d.

### X. Field Course

A course of practical instruction, with field excursions, will be given at times to be arranged.

Fee,  $\pounds_3$  13s. 6d. An allowance of  $\pounds_1$  1s. will be made to students who attend the excursions towards the payment of railway fares.

#### XI. Geology applied to Coal Mining

Tuesdays at 4 p.m. during the second and third terms. *Outline of Physical and Dynamical Geology*: Denudation, transport, and accumulation of rocks; volcanoes and earthquakes; elevation and depression of the earth's crust; condition of the interior of the earth; earth folds, and the origin of mountain chains.

*Historical Geology*: General outline of Historical Geology; detailed description of the carboniferous rocks, with special reference to the Yorkshire coalfield; the rocks which overlie the carboniferous; search for coal under the newer rocks; the drift deposits, how they affect the discovery and working of coal.

Fee, £, I IS.

#### XII. Matriculation Course: Geography

Mondays, Wednesdays, and Fridays, at 9.30 a.m., in the second and third terms.

(a) *Physical Geography*: The agents at work on and beneath the surface of the earth; phenomena resulting from earth-heat; distribution of land and water.

(b) Political and Commercial Geography: Political and economic effects of natural features and conditions; outlines of Geography of the British Empire (including Historical Geography); Political and Commercial Geography of the United Kingdom.

The course will prepare for the Matriculation examination. Fee,  $\pounds_{2}$  12s. 6d.

#### Laboratory

The Geological laboratory will be open every day except Thursday.

Students preparing for the Final B.Sc. (Ordinary), will be required to take not less than 4 hours practical work a week exclusive of the time devoted to II, III, or IV. Students preparing for Honours will be required to take not less than 6 hours a week.

For fees, see page 118.

# Courses in Technology

## **CIVIL & MECHANICAL ENGINEERING<sup>1</sup>**

#### Professor GOODMAN Mr GILCHRIST Mr. MACLACHLAN Mr. MVERS Mr. DUNCAN Mr. THOMSON

The course of instruction in Engineering extends over three sessions, and comprises (a) Lectures on Engineering Principles and Work; (b) Instruction in Machine and Geometrical Drawing; (c) Experimental Work in the Engineering Laboratory.

The work of the Department is intended to provide a systematic training in the application of scientific principles to engineering purposes, and is not intended in any way to supersede the usual routine of engineering works and offices. An apprenticeship or pupilage in such works is an absolute necessity to every engineering student, and is the only means by which he can obtain a thorough knowledge of the practical details of his future work.

The scientific training at the University must be regarded as a means of acquiring the principles that underlie the art of Engineering, and the training in the works as necessary for acquiring the art itself.

It is very desirable that all students should have some practical experience in engineering works before taking the University course.<sup>2</sup>

### Entrance Examination

All students entering the departments of Civil and Mechanical and Electrical Engineering, or entering the degree course or the diploma course in Mining, are required to produce certificates of having passed either the Matriculation examination, the Oxford or Cambridge local

<sup>1</sup> For fuller information-including detailed syllabuses of lecture and laboratory courses, special departmental time-tables, description of equipment, and further particulars relating to degrees and diplomas—see the special prospectus of the Engineering departments, to be obtained from the Registrar on application. 2 See a pamphlet published by the University on "The Training of Professional

The Registrar will forward a copy on application. Engineers."

examination in Mathematics, London University Matriculation, or other approved examination, or to pass the following Entrance<sup>1</sup> examination :—

Arithmetic: The ordinary rules of Arithmetic including vulgar and decimal fractions, proportion, factors, H. C. F. and L. C. M., practice, square root, conversion from English to metric system, averages, percentages, interest.

- Algebra: The ordinary rules of Algebra including fractions, brackets, simple equations with problems. H. C. F. and L. C. M.
- Geometry: The first book of Euclid or its equivalent including riders.
- Trigonometry: Simple problems involving the trigonometrical ratios.

Every student is required to pass in each subject.

Students under 17 have to take a paper on English Composition and Dictation.

### Degree and Diploma Courses

Students who can devote three years to attendance at the University are strongly recommended to take the B.Sc. degree course in Engineering Science (see p. 207). Students intending to read for a degree are required to pass the Matriculation examination before taking the University course. The Institution of Civil Engineers now requires that all candidates for membership shall take an Honours Engineering degree or shall pass an equivalent examination before being admitted.

Diplomas in (a) Civil Engineering and (b) Mechanical Engineering are granted by the University to students who have pursued a full three years' course of study in Engineering, Mathematics, and other subjects, and have passed the usual term examinations in each class, and such final examination as may be appointed, to the satisfaction of the Senate. Candidates for these diplomas, who do not pass satisfactorily in their examinations in any year, may be required to take that year's course over again, in whole or in part, as the Senate may determine.

r The Entrance examination is held in July and October, and it may (under certain conditions) be taken at any place convenient to the candidate. The examination will be held on Tuesday, October 2, 1906, at 2 p.m.; and Tuesday, July 4, 1907, at 2 p.m. Candidates should send in their names to the Registrar beforehand. Students who have attended Evening Classes at the University, and have taken a satisfactory position in the examinations, will be exempted from this examination.

### LECTURE COURSES

#### I. First Year: Elementary Engineering

Mondays, Wednesdays, and Fridays, at 4 p.m.

This course is suitable for students in all branches of Engineering.

*Part I*: Elementary graphical constructions, strength of materials, riveted joints, and beams. *Part II*: Fuels, steam boilers, steam and the steam engine, gas and petroleum engines, transmission of power, and hydraulics.

Fee, £4 4s.

#### II. General Engineering

This course is intended to give students who are going into other branches of industry than that of Engineering an intelligent idea of engines and machinery, &c., without entering into minute details.

Course A: for students of Applied Chemistry, Dyeing Leather Manufacture, and Textile Industries.

Mondays, Wednesdays, and Fridays, at 9.30 a.m.

Materials, fuels, boilers, steam engines, gas and oil engines, hydraulics, prime movers other than heat engines, transmission of power, and various kinds of machines, air, water, and other liquids, grinding machinery, drying plant, fans, electric transmission of power.

Fee, £3 135. 6d.

Course B: for Agricultural students.

Mondays, Wednesdays, and Thursdays, at 2 p.m., during the first and second terms only.

Elementary mechanics; air, water, heat; steam engine, gas and petroleum engines; electrical generators, motors and conductors.

Fee, £,2 125. 6d.

Course C: for Mining students.

Mondays, first and third terms, at 4 p.m.

Mechanics, strength of materials, heat, boilers, steam engines.

Fee, £ 1 15.

Laboratory Class: On Mondays, throughout the session, from 5.30 to 7 p.m., instruction will be given in the Engineering laboratory in: Mensuration, levers, graphic determination of forces, testing, indicating, steam and boiler testing.

Fee, £1 115. 6d.

### III. Second Year : Civil Engineering

Tuesdays and Thursdays, at 4 p.m., and Saturdays at 11.30 a.m.

Part I: Chain surveying, needle surveys, plane table, angular instruments, and levelling. Part II: Geodetic astronomy, optical instruments for the measurement of distances, setting out of railway curves, half width of railways, hydrographic, geodetic, and underground surveying. Part III: Girders, bridges, and roofs of steel and timber.

Fee, £4 4s.

#### IV. Third Year: Civil Engineering

Tuesdays and Thursdays, at 9.30 a.m., and Saturdays at 10.30 a.m.

*Part I*: Materials of Civil Engineering other than metals, including timber, limes and cements, stone, bricks and pipes; foundations; theory of masonry structures. *Part II*: Roads, streets and railways. *Part III*: Water Supply and Sanitary Engineering.

Fee, £4 4s.

### V. Practical Surveying

Instruction is given in Surveying and field work for about fourteen clear working days during the Easter vacation. The class is held at Barden in Wharfedale, where accommodation is provided at a farmhouse.

Fee—Including board and lodging... ... £6 6 o "—Including the Civil Engineering Lectures in Class III or IV ... ... 10 10 o

#### VI. Second Year : Mechanical Engineering

Mondays, Wednesdays, and Fridays, at 10.30 a.m., with an exercise class one hour a week.

Graphical constructions, strength of materials, steam boilers, steam and the steam engine, air, gas and petroleum engines, transmission of power, hydraulics, mechanics of machines.

Fee, £4 45.

## VII. Third Year: Mechanical Engineering

Course A: for civil and mechanical engineers.

Tuesdays and Thursdays, at 10.30 a.m., during the first and second terms, with an exercise class one hour a week.

Hydraulics and compressed air.

Fee, £2 125. 6d.

Course B: For electrical and mechanical engineers.

Saturdays at 10.30 a.m., with an exercise class one hour a week.

Steam engines, dynamics of the steam engine, transmission of power, friction and lubrication.

Fee, £ 2 25.

Course C: For mechanical engineers.

Tuesdays and Thursdays, at 10.30 a.m., during the third term, with an exercise class one hour a week.

Strength of materials, kinematics of machines, refrigerating. Fee,  $\pounds_{I}$  15.

Fee for courses A, B and C,  $\pounds 4$  4s.

### VIII. Engineering Drawing

The Drawing department is open every day. A draughtsman is always in attendance.

#### Fees for the Session:

Students	attending							
.,	"	6	hours	per weel	K	 5	5	0
,,	;;	3	,,	•		 3	3	0

### VIIIa. Machine Drawing and Design

Saturdays, at 9.30 a.m. Fee,  $\pounds_1$  115. 6d.

#### VIIIb. Graphics

Thursdays at 11.30 a.m.

No fee will be charged to students taking the full drawing course.

### Courses in Technology

#### IX. Engineering Laboratory

The work done in this department consists chiefly of making experiments and testing operations; it in no way whatever pretends to supersede the practical training that every engineer must undergo in engineering works. It should be clearly understood that no instruction is given in the use of either hand or machine tools; such work can only be properly done in engineering works.

For fees see p. 118.

The experimental work consists of systematic instruction in the strength and properties of the chief materials used in engineering construction. The work, as far as possible, is done on a large and practical scale. For particulars of the equipment of the laboratory, see the prospectus of the Engineering departments.

### Evening Course

See under Evening Classes, page 333.

## ELECTRICAL ENGINEERING

Mr. PARR

### Mr. FRENCH

The courses of study in this department have been arranged to meet the requirements of different classes of students as follows :

I. A course for the degree of B.Sc.

2. A course for the diploma in Electrical Engineering.

Students who are unable to devote the time required for the complete courses for the degree or diploma may attend parts of those courses.

The conditions respecting Entrance examination are the same as those prescribed in Civil and Mechanical Engineering. (See page 247).

The Degree course necessitates three years' attendance at the University after matriculation in the University.

<sup>1</sup> For fuller information—including detailed syllabuses of lecture and laboratory courses, special departmental time-tables, description of equipment, and further particulars relating to degrees and diplomas—see the special prospectus of the Engineering departments, to be obtained from the Registrar on application.

The Diploma course extends over three years after the Entrance examination, but may, under certain conditions, and where the student possesses an intimate knowledge of all the work of the first year, be taken in two years.

The instruction during the first year of the above courses is the same for Civil, Mechanical, and Electrical Engineering. In the second year the electrical engineering student begins to specialise in the work of the department, while in the third year most of his time is devoted to this particular work.

### LECTURE COURSES

#### I. Elementary Electrical Engineering

Mondays and Fridays at 2 p.m., and Thursdays at 4 p.m. throughout the session.

This course is specially intended for students in their second year, who are preparing for the University degree or the diploma in Electrical Engineering, and embraces the application of fundamental principles in the construction and action of electrical engineering appliances in general.

Fee, £4 4s.

#### II. Advanced Electrical Engineering

Mondays, at 4 p.m., throughout the session.

This course is specially intended for students in the third year of preparation for the degree or diploma, and embraces the generation, transformation, distribution, and applications of single and polyphase alternating currents of electricity.

Fee, £1 115. 6d.

### III. Advanced Electrical Engineering

Tuesdays, at 4 p.m., throughout the session.

This course is specially intended for students in the third year of preparation for the degree or diploma, and embraces the generation, transformation, distribution, and applications of continuous currents of electricity.

Fee, £1 115. 6d.

#### IV. Electrical Design

Lectures on Fridays at 4 p.m., and Designing and Drawing on Mondays, 11.30 a.m. to 12.30 p.m., and 2 to 4 p.m., Thursdays 9.30 a.m. to 12.30 p.m., throughout the session.

This course also is specially arranged for students in the third year of preparation for the degree or diploma, and embraces lectures on the general principles underlying electrical design, and also the complete mechanical and electrical design of direct and alternating current dynamos, motors, transformers, condensers, together with installation design and estimates. Students will themselves design and draw from new data the machines and appliances dealt with in the course.

Fee,  $f_{,3}$  135. 6d.

### Evening Course

See under Evening Classes, page 334.

### ELECTRICAL ENGINEERING LABORATORIES

These comprise—elementary laboratories, dynamo, electromotor, transformer, instrument, photometer, and cable jointing rooms, which are equipped with a large variety of the most modern plant and appliances necessary for elementary and advanced testing in electrical engineering.

### MINING<sup>1</sup>

## Assisted by the Drapers' Company of the City of London, and by the West Yorkshire Coal Owners' Association

# Professor THOMPSON

Mr. Perkin

The courses of study in this department have been arranged to meet the requirements of different classes of students, as follows :

- I. Three years' course in General Mining, preparing for the degree of B.Sc.
- 2. Two years' course in Coal Mining, preparing for the diploma in Coal Mining.

<sup>1</sup> For fuller information—including detailed syllabuses of lecture and laboratory courses, special departmental time-tables, description of equipment, and further particulars relating to degrees and diplomas—see the special prospectus of the Engineering departments, to be obtained from the Registrar on application.

## Mining

For degree and diploma students the conditions respecting Entrance examinations are the same as those prescribed in Civil and Mechanical Engineering. (See page 247).

# I. Degree Course in General Mining<sup>1</sup> (Three Years)

This course of instruction is intended for students who desire to qualify themselves as mining engineers, surveyors, or assayers, and also for those who intend, in the future, to take charge of mining and prospecting operations in the colonies or foreign countries. During the first year the student applies himself entirely to general science and Engineering. In the second year he continues his work in general science and Engineering, adding Electrical Engineering and the introductory lectures on Coal Mining. In the third year the student takes a course of Geology, including field work, but spends the greater part of his time in special mining work. Students are required to devote the summer vacation to getting experience in mines.

In addition to the subjects specified in the time tables below, students are advised to study a modern language.

Students who are unable to afford time for the complete course may be admitted to the Mining, Surveying, and Assaying courses on furnishing proof that they possess sufficient knowledge to follow the instruction given.

Fees, first year,  $\pounds_{33}$  1s. 6d.; second year,  $\pounds_{30}$  3s.; third year,  $\pounds_{32}$  7s.

First Year	Second Year
Hours	Hours per week
Mathematics, Intermediate 3	Mathematics, Final 3
Physics II 3	Electrical Engineering 3
Chemistry, General Course 3	Engineering VI 3
Engineering I 3	Coal Mining I
Physical Laboratory 3	Engineering Laboratory 6
Chemical Laboratory 6	Electrical Engineering
Engineering Drawing and	Laboratory 3
Laboratory 9	Engineering Drawing 6

Syllabus

1 Graduation as B.Sc. on this course has been recognized by the Secretary of State for the Home Department as equivalent to two years' service in the mine for the purposes of the Colliery Manager's certificate.

### Courses in Technology

#### Third Year

Hours

				r week
Mining				3
Metallurgy, 1st term			]	
Ore Dressing, 2nd term				2
Surveying, 3rd term	• • • •			
Geology I.		•••		3
Geology Laboratory				6
"Field Course				
Metallurgy Laboratory, 1				
Mining Laboratory and S	Surveying,	2nd	and	15
3rd terms				

## II. Diploma Course in Coal Mining<sup>1</sup>

### (Two Years)

This course is arranged for those who intend to devote their attention to coal mining at home, and who, at the same time, desire to get a liberal training in the scientific principles underlying their profession.

Students entering this course apply themselves during the first year chiefly to general science and Engineering. In the second year the work in Electrical Engineering is continued; Geology is added, but students devote themselves mainly to the special mining work, taking the lectures on Mining and those on Metallurgy (first term only), which deal with fuel, refractory materials. and the properties of metals and alloys. In the laboratory students receive instruction in the testing of fuel, safety lamps, fans, &c., and conduct experiments on coal washing. The remainder of their time is spent in making drawings of machinery used in mines, plan drawing, and in the course of field and underground work in surveying.

Students are required to obtain four months' experience at a mine during the vacations or to have had previous experience at mines before entering on the course.

Fees, first year,  $\pounds_{34}$  os. 6d.; second year,  $\pounds_{27}$  3s. 6d.

r Possession of this diploma has been recognized by the Secretary of State for the Home Department as equivalent to two years' service in the mine for the purposes of the Colliery Manager's certificate.

## Mining

#### Syllabus

First Year

Physics I. Chemistry I. (two terms) Mathematics II. Engineering I. Coal Mining Chemical Laboratory, three hours Physical Laboratory, two hours Engineering Laboratory, six hours Drawing, five hours Electrical Engineering Laboratory,

two hours

Second Year Mining Metallurgy (first term) Geology I. Geological Laboratory, three hours Electrical Engineering Laboratory, three hours Mining Laboratory and Surveying, fifteen hours

#### LECTURE COURSES

### I. Coal Mining

#### Mondays, at 2 p.m.

These lectures are intended to co-ordinate the information which students have acquired during the previous vacation, and to show them what to observe in the next summer's work preparatory to the Mining lectures of the third year.

With this object the general processes necessary for the extraction of coal from the ground will be passed in review, while to relieve the lectures of the third year those mining operations which find their best exemplification in coal mining will be discussed in detail.

Fee, £1 115. 6d.

#### II. Mining

Mondays, Wednesdays, and Fridays, at 9.30 a.m.

This course will consist of about 90 lectures, which will be delivered during the third year. The object of these lectures will be to explain to students the methods, operations, and appliances commonly employed in mining, with illustrations from actual practice in various districts and countries, and to indicate the principles which should influence the selection of methods and the introduction of such variations in them as local circumstances may demand.

Fee, £3 138. 6d.

I

## Courses in Technology

#### III. Dressing of Minerals

Two lectures a week during the second term at times to be arranged. The principal methods and machines adopted for the preparation of coal and ores for the market will be described.

Fee, £, 1 1s.

#### IV. Laboratory Work

A course of instruction in testing fuel and refractory material and the assaying of ores and metallurgical products. Special attention will be given to the methods suitable for prospectors and to experimental work in the concentration of minerals by water.

#### V. Surveying (Office Work)

During the second term students in the regular course spend their time in plotting surveys, drawing mining machinery, and in general office work in studying the methods of recording field observations, the purposes to which these are applied, and the instruments with which they are made.

#### VI. Surveying (Field and Underground Work)

During the third term a course of instruction in field work will be given, the students making and plotting their own surveys.

## VII. Mine Surveying

Two lectures a week during the third term at times to be arranged. Supplementary to the course of Field and Underground work.

Fee, £, 1 15.

The fees for laboratory work and surveying will be according to the time spent by the student in such work. (See page 118).

#### Metallurgy

See Department of Fuel and Metallurgy, page 274.

#### Evening Course

See under Evening Classes, page 335.

## Textile Industries

# TEXTILE INDUSTRIES<sup>1</sup>

Endowed by the Clothworkers' Company of the City of London

		Professor	Beaumont		
Mr.	Hollis	Mr.	Yewdall	Mr.	Law
Mr.	WHOWEL	l Miss	Benton	Mr.	FARLEY
	Mr.	HOLLOWAY	Mr.	Fox	

The Department comprises the following branches :

(a) Woollen Yarn Manufacture.

(b) Worsted Yarn Manufacture.

(c) Designing, Weaving, and Textile Manufacturing.

(d) Finishing of Textile Fabrics.

Each branch possesses a complete plant of machinery designed and constructed for the demonstration of the technicalities of the various processes.

All the experiments made on the scouring, blending, carding, combing, spinning, weaving, dyeing, and finishing machines are primarily conducted for showing the nature and results of certain methods of work. The student records the experiments made during the session, and receives actual specimens of materials, yarns, and fabrics.

The scheme of teaching, as it relates to mechanical operations, is devised to give as varied an experience in spinning and textile manufacturing as possible, and also to supplement practically, in an efficient way, the lecture courses of study.

The Spinning Buildings are equipped with machinery for treating fine, medium, and coarse wools from the raw or greasy state to the spun yarn, whether on the worsted or woollen system, and for the construction of single, folded and fancy twist threads.

In the Weaving Sheds there are 116 looms, including the principal types of power looms, with the necessary accessories, such as winding, warping and beaming (hand and power), card stamping and lacing machines, healding, pegging, and other frames. This extensive series of looms affords unique facilities for experiments in the design, structure, weaving, and colouring of all classes of fabrics.

1 For further details and time-tables of all courses of study see the prospectus of the department of Textile Industries, obtainable from the Registrar on application.

The Finishing Shed contains machinery for scouring, milling (by stocks, machine, and combined milling machine and stocks), raising, crabbing, cutting (on three builds of machines), and pressing (electric system).

In the Textile Museum there is a valuable collection of woven and other specimens, which students have the privilege of examining during the session.

The testing and examination of fibres, materials in the several stages of manufacture, yarns and fabrics, are so important in teaching and actual manufacturing that a conditioning laboratory has been equipped with apparatus for this purpose.

# Courses of Study

The following are the principal courses of study:

- (a) Textile Designing and Cloth Finishing
- (b) Woollen and Worsted Spinning
- (c) Textile Manufacture, including Woollen and Worsted Spinning, Textile Designing and Weaving and Cloth Finishing.

#### Courses for the Diploma

Diplomas are awarded in each of the above courses when the following subjects are also taken :

- (a) Lectures in Engineering, French or German; Practice in Applied Art, and Mechanical Drawing.
- (b) Lectures in First Year Textile Designing and Weaving, Engineering, French or German, and Mechanical Drawing.
- (c) Lectures in Engineering, French or German, and Mechanical Drawing.

For general regulations applicable to students taking the courses of study and examinations for the diploma, see page 159.

# Lecture Courses and Experimental Work

## I. Designing and Weaving

First year: Lectures, pattern analysis, designing and calculations, Tuesdays and Thursdays, from 9 to 11.30 a.m.,

throughout the session. Subjects : Designs and fabrics, hand looms, power looms, yarns, calculations, pattern dissection.

Fee, £5 5s.

Experimental Weaving. For fees see page 118.

Second year: Lectures, designing, pattern analysis, and calculations, on Mondays, from 9.30 to 11.30 a.m., and Fridays, from 10.30 a.m. to 12.30 p.m. throughout the session. Subjects: Fabrics and designing, power looms, Jacquard or Harness loom, calculations, pattern analysis. Fee,  $\pounds_5$  5s.

Experimental Weaving. For fees see page 118.

*Third year*: Daily, except Saturdays, from 9.30 a m., to 12.30 p.m., and from 2 to 5 p.m. This class is intended for students who desire to study any particular branch of textile manufacture.

Experimental Weaving. For fees see page 118.

#### II. Textile Colouring

First year: Lectures, Tuesdays and Thursdays, from 11.30 a.m. to 12.30 p.m., during the first and second terms. Subjects: Theories of colouring; qualities of colours; functions of colours in woven design; harmony and contrast; various styles of patterns produced by colours, such as mixtures, stripes, checks, &c. Fee,  $\pounds_1 2$  2s.

Second year: Mondays, from 11.30 a.m. to 12.30 p.m., during the first and second terms. Subjects: Colour in relation to combination and drafted designs; backed and double-make cloths; rib patterns; spotted effects; figured patterns coloured in the warp, in the weft, and in both warp and weft. Fee,  $\pounds_1$  1s.

#### III. Finishing of Woven Fabrics

Lectures on styles and processes of finishing, and the construction of finishing machinery, on Fridays, from 9.30 to 10.30 a.m. Subjects : Scouring, tentering, milling, washing off, raising (both on the gig and by hand) cutting or cropping, pressing and steaming. Practical Finishing, Tuesdays or Thursdays, from 2 to 4 p.m. Fee (for both lectures and practical course),  $\pounds 2$  25.

#### Courses in Technology

#### IV. Woollen Yarn Manufacture

First year: Lectures, Wednesdays, from 4 to 5 p.m., during the first and second terms. Subjects: Materials, processes, machinery, and calculations. Fee,  $\pounds_I$  1 is.

Second year : Lectures, Tuesdays, from 4 to 5 p.m., during the first and second terms. Subjects : Processes, machinery, and calculations. Fee,  $\pounds_{1}$  1s.

Practical Woollen Spinning. For fees, see page 118.

## V. Worsted Yarn Manufacture

*First year*: Lectures, Fridays, from 4 to 5 p.m., during the first and second terms. Subjects: Materials, processes, machinery, and calculations. Fee,  $\pounds_{I}$  1 s.

Second year: Lectures, Thursdays, from 4 to 5 p.m., during the first and second terms. Subjects: Materials, processes, machinery, and calculations. Fee,  $\pounds_{I}$  is.

Practical Worsted Spinning. For fees, see page 118.

#### VI. Yarn and Fabric Analysis

These studies are followed in a laboratory specially equipped with testing, conditioning and other apparatus.

## VII. Special Courses

Third and fourth year students and students who have graduated at other institutions, are afforded facilities of pursuing special courses of study in any branch of woollen and worsted spinning, designing and weaving or manufacturing.

## VIII. Art applied to Textile Design

#### Mr. FARLEY

The courses of study relate to the analysis, composition and colour qualities of decorative design applicable to the various styles of woven fabrics; and comprise first, second, and third year classes in both lectures and practice.

Textile students for the diploma in Designing and Weaving (see page 260) and also students in the designing of carpets, tapestries, mantle cloths and other figured fabrics are required to take the courses in Applied Art.

First year: Lectures on Wednesdays, from 10.30 to 11.30 a.m.

Practical work in the Art Studio on Wednesdays, from 9.30 to 10.30 a.m., 11.30 a.m. to 12.30 p.m., and from 2 to 4 p.m. or 3 to 5 p.m.

Fee,  $\pounds_1$  115. 6d. per term ;  $\pounds_2$  125. 6d. for two terms ; or  $\pounds_3$  35. for the session.

Second year: Lectures on Thursdays, from 11.30 a.m. to 12.30 p.m.

Practical work in the Art Studio on Thursdays, from 9.30 to 11.30 a.m., and from 2 to 4 p.m.

Fee,  $\pounds_1$  115. 6d. per term ;  $\pounds_2$  125. 6d. for two terms ; or  $\pounds_3$  3s. for the session.

*Third year*: Wednesdays or Thursdays, from 9.30 a.m. to 12.30 p.m., and from 2 to 4 p.m.

Fee,  $\pounds_1$  115. 6d. per term ;  $\pounds_2$  125. 6d. for two terms ; or  $\pounds_3$  35. for the session.

Arrangements may be made by which students who wish to devote themselves more closely to the artistic side of Textile Design may attend the Design Studio for two or more days per week. The fees for such attendance will be at the same rate as for the above Third Year course.

## Evening Course

See under Evening Classes, page 337.

# DYEING AND TINCTORIAL CHEMISTRY<sup>1</sup>

Professor GREEN

Mr. Perkin Mr. Steven

The instruction given in the various courses is arranged to meet the requirements both of students intending to become practical dyers or masters of dyeworks, and of those wishing to acquire a more thorough acquaintance with the chemistry of the colouring matters and their manufacture, with the object of becoming dyers' chemists, chemists in colour works, travelling chemists for dye manufacturers, experts in analysis of dyewares, &c. For the latter class,

<sup>1.</sup> For fuller information, see special Prospectus of the Dyeing and Tinctorial Chemistry Department, to be obtained from the Registrar on application.

*i.e.*, colour chemists, an intimate acquaintance with the structural organic chemistry of the artificial dyestuffs is essential, and a very thorough knowledge of pure chemistry is required before specialising in this direction. For the dyer such an advanced knowledge, though useful, is not essential, and in any case cannot be acquired in a three years' course. It is, however, equally necessary for the dyer that he should acquire at the outset a sound fundamental knowledge of the chemical and physical sciences underlying the art with which he is ultimately to deal, though the study of the colouring matters may be confined to a general acquaintance with their chemical relationships and a knowledge of their properties and dyeing behaviour.

To meet the requirements of these two classes of students, two courses have been arranged, namely :

- 1. A three years' course for practical dyers, qualifying for the University diploma in Dyeing. (See page 224).
- 2. A four years' course for colour chemists, qualifying, if taken after Matriculation, for the degree of B.Sc. (See page 205).

Students holding a degree of any University (English or foreign) or otherwise bringing forward satisfactory evidence of a sufficient previous training in pure chemistry and general science will be admitted at once to the lectures and practical work of the department and become eligible for the diploma. Such previous training will be allowed to count in reducing the length of their course to an extent corresponding to the knowledge they possess.

Students of the Textile Department who are unable for want of time to take a full course of study in dyeing will not be required to study pure chemistry, but may enter for the lectures on the chemical technology of the textile fibres and dyeing together with practical work in the Experimental dyehouse.

The lectures on the chemistry of the artificial and natural colouring-matters will be open to senior students in the department of pure chemistry without joining the regular four years' course.

# Dyeing

# I. Diploma Course for Practical Dyers (Three Years)

This course is recommended to students who wish to obtain a good scientific and practical education in the art of Dyeing.

	urs week	Second Year	week
Chemistry, General Course	4	Organic Chemistry	 3
Physics, Intermediate	3	General Engineering	 3
German	-	German	
Chemical Laboratory	22	Chemical Laboratory	 II
		Experimental Dyehouse	 15

## Third Year

Hours per week

Fees (including Entrance and University Union fees, but exclusive of German), first year,  $\pounds_{24}$  19s.; second year,  $\pounds_{27}$  12s. 6d.; third year,  $\pounds_{22}$  7s. 6d.

# II. Degree Course for Colour Chemists (Four Years)

This course is recommended to students who desire to become chemists in colour works, dyers' chemists, travelling chemists for dye manufacturers, experts in analysis of dyewares, &c.

-	
First Year Hours	Second Year Hours
per week	per week
Classicher Company Company	Chemistry, Organic, &c 6
Chemistry, General Course 4	Chemistry, Organic, &c 0
Physics, Intermediate 6	General Engineering 3
Mathematics 3	German
German	Chemical Laboratory 22
Chemical Laboratory 18	-
Onemicar Enseries)	
Third Year Hours	Fourth Year Hours
per week	per week
Chemical Technology of	Artificial Colouring Matters)
Textile Fibres (1st term) } 2	(1st and 2nd terms)
Dyeing Lectures (2nd term)	Natural Colouring Matters
German	(3rd term))
Experimental Dyehouse and	Clothworkers' Laboratory,
Clothworkers' Laboratory 30	Calico Printing and Prac- 30
	tical Dyehouse
	tical Dyenouse

Fees (including Entrance and University Union fees, but exclusive of German), first year,  $\pounds_{28}$  15s. 6d.; second year,  $\pounds_{26}$  14s. 6d.; third year,  $\pounds_{21}$  6s. 6d.; fourth year,  $\pounds_{22}$  5s. 6d.

## Research Work

Special facilities are provided in the Clothworkers' Research laboratory for the conduct of research work in colour and textile chemistry. The laboratory is a very spacious one and is thoroughly equipped for carrying out scientific and technical investigations in these subjects. Students of the Department and also of the Department of Pure Chemistry who have satisfactorily completed their full term of study will find it greatly to their future advantage to spend an extra year (5th) upon research work. A similar invitation is extended to graduates of other Universities (English or foreign), and to other fully qualified chemists, who may obtain admission direct as research workers for any period desired.

For conditions of admission to research work at special fee, see page 119.

#### LECTURES AND LABORATORY WORK

## I. Chemical Technology of Textile Fibres

Tuesdays and Thursdays at 9.30 a.m. during the first term. The chemical and physical properties of the various animal and vegetable fibres, viz., cotton, flax, hemp, ramie, jute, wool, hair, silk, and artificial silk; and the processes and machinery employed in the isolation, purification, bleaching, and finishing of the different fibres and of the textile materials prepared from them.

Fee, £, I IS.

#### II. Chemistry and Technology of Dyeing

Tuesdays and Thursdays, at 9.30 a.m. during the second term.

Mordants; classification of colouring matters; methods of application in dyeing and printing of the various classes of colouring matters; theory of dyeing; testing of colours for fastness; machinery for dyeing; printing of cotton, wool, and silk.

Fee, £1 15.

#### III. Chemistry of the Artificial Colouring Matters

Tuesdays and Thursdays at 4 p.m., during the first and second terms.

Distillation of coal-tar and separation of benzene, toluene, naphthalene, anthracene, &c.; preparation of intermediate products of colour manufacture; the manufacture, properties, and constitution of the most important colouring matters belonging to the following groups :— Rosaniline, pyrone, azine, oxyazine, thiazine, acridine, quinoline, thiobenzenyl, nitro, azo, stilbene, anthracene, sulphide colours, and indigo; general methods and plant employed in the preparation of colouring matters and their raw materials.

Fee, £ 2 25.

#### IV. Chemistry of Natural Colouring Matters

Tuesdays and Thursdays at 4 p.m., during the third term. The origin, chemistry, and technology of the principal natural dye stuffs : Madder, logwood, brazilwood, cochineal, barwood, safflower, cudbear, orchil, weld, turmeric, quercitron bark, Persian berries, fustic, catechu, indigo.

Fee, £1 1s.

#### V. Laboratory Work

(1.) The Experimental dyehouse will be open for work every weekday during the session from 9 a.m. to 5 p.m., Saturdays 9 a.m. to 1 p.m. The dyehouse is fitted up with modern dyebaths suitable for comparative dyeing trials, drying stoves, and other appliances. A special Exposure chamber has been erected in a convenient position for the purpose of making tests of the fastness of colours to light.

(2.) The Practical dyehouses are equipped with the most modern machinery for carrying out experiments on a practical scale. The equipment includes many model machines, all of which are driven by electric motors. In these dyehouses advanced students of dyeing receive training in the treatment of all classes of textile materials.

(3.) The Printing laboratory is equipped with a model printing machine, steaming chamber, colour pans, &c. A practical course in calico printing is held during the third term.

(4.) The Clothworkers' laboratory is a spacious building provided with every facility for the conduct of chemical work upon colouring matters. The work carried out comprises: (a) Analysis of colouring matters; (b) preparation of coal tar products and colouring matters; (c) researches upon artificial and natural colouring matters, directed to the determination of their constitution, discovery of new groups, the solution of technical problems, &c.

#### VI. Special Courses of Study

Experimental classes will also be held in the following specialised subjects if a sufficient number of students present themselves :

- 1. Paper staining.
- 2. Straw dyeing.
- 3. Lake and pigment manufacture.

#### **Evening Course**

See under Evening Classes, page 338.

#### Museum

The museum of natural and artificial dyestuffs and textile fibres is open to students daily.

#### Examinations of the City and Guilds of London Technical Institute

The above courses prepare for the technological examinations of the City and Guilds of London Institute in Dyeing and also in Coal Tar Products. Students of the Department are recommended to present themselves for these examinations in the last year of their University course. (See page 225).

## LEATHER INDUSTRIES<sup>1</sup>

## Assisted by the Skinners' Company of the City of London and by Members of the Leather Trades

	Professor	Procte	ER
Mr.	KOPECKY <sup>2</sup>	Mr.	BRUMWELL
Mr.	Mc Candlish	Mr.	Bennett

The object of the courses of study in this department is, in the first instance, to familiarise students, both by information in lectures and by practical handling of the materials, with the details of the tanning process and the reasons why particular modes of treatment produce particular effects. This knowledge once gained, the student is in a position to judge of the causes of defects, and the changes which it is necessary to make to prevent or remedy them or to modify the leathers produced in any way which may meet the requirements of the trade. Methods of chemical and microscopic analysis are also taught and practised for determining the purity and value of the various materials employed, and for checking their use in the different stages of the In the latter part of the course, students are process. encouraged to attempt the practical production of leathers in which they are interested, and to study the smaller details of the processes. Particular attention is paid to leather dyeing and the manufacture of coloured leathers.

The courses of study have been arranged to meet the requirements of different classes of students as follows :

- 1. A course for the degree of B.Sc. in the Honours School of Applied Chemistry (Chemistry of Leather Manufacture).
- 2. A course for the Ordinary degree of B.Sc.
- 3. A course for the diploma in Leather Manufacture.

Shorter courses of study will be arranged for students who cannot afford the necessary time for a degree or diploma course, but in no case can a student be allowed to work in the Leather Industries laboratories until he has

r. For fuller information, including description of laboratory equipment, see the special Prospectus of the Leather Industries Department, to be obtained from the Registrar on application.

<sup>2.</sup> Mr. Kopecky, having obtained a year's leave of absence, will not lecture during the present session.

satisfied the Professor that he has the requisite preliminary training in chemistry. Some previous acquaintance with actual leather manufacture is very desirable before taking the University courses.

The International Association of Leather Trades Chemists, which now includes most of the leading chemists of the manufacture, demands as a condition of membership a three years' course of study of pure chemistry of University standard, or the evidence of an equivalent knowledge, and at least one year's experience in the laboratory of a leather works or leather industries school. Students who desire membership in this Association are recommended to take the course prescribed for the B.Sc. degree with Honours, though a less qualification may be accepted.

## I. Honours Degree Course

#### (Four Years)

For particulars see page 220, and the details given below respecting the course for the Ordinary degree.

# II. Ordinary Degree Course (Three Years)

For first year's course, see page 209.

Second Year		Third Year	
Chemistry Lectures Chemical Laboratory	ratories	H	6 3 1 2

Fees (including Union fee) second year,  $\pounds_{25}$  3s.; third year,  $\pounds_{25}$  12s. 6d.

C C F I

# III. Diploma Course (Three Years)

This course is suitable for those who intend to become technical managers in leather works, and is recommended to sons of tanners and others who require a practical knowledge of the science and technology of the industry, but are unable to take a degree course.

First Year	Second Year		
Hours per week			ours week
Chemistry, General Course 3	Organic Chemistry	per	
Chemical Laboratory 18	Chemical Laboratory		
Mechanical Drawing 3		•••	6
Leather Industries Workshops 3	Principles of Leather Manufacture		
	Leather Industries Labo	 ra-	3
	tories and Workshops		15

#### Third Year

	per week
General Engineering (IIA)	3
Chemistry and Physics of Leather Manufacture	Ī
Currying, Dyeing and Finishing (1st and 2nd	
terms)	2
terms) Technical Microscopy and Bacteriology (3rd	r 4
term)	
Leather Industries Laboratories and Workshops	21

Fees, (including Entrance and Union fees), first year,  $\pounds_{25}$  6s. 6d.; second year,  $\pounds_{23}$  19s.; third year,  $\pounds_{23}$  7s. 6d.

In awarding this diploma, in addition to any special examinations which may be imposed, the University will take into account the result of all terminal examinations during the course, and students failing in any of these may be disqualified, or required to repeat that part of the course.

Students who have taken not less than a two years' course in pure chemistry in the University of Leeds (or other institution approved by the Senate for the purpose) and who take the third year course of this scheme with the addition of the lecture course on the Principles of Leather Manufacture, and pass the prescribed examinations will also be entitled to the diploma.

Hours

## LECTURE COURSES

#### I. The General Principles of Leather Manufacture

Lectures on Mondays, Wednesdays, and Fridays, at 10.30 a.m., throughout the session.

Character and sources of hides and skins used in Leather manufacture, their structure and constituents; preparation for tannage, including soaking, liming, and other preliminary processes, and the chemistry involved: the vegetable tanning process and its materials, with special reference to the heavier leathers; mineral and special tanning processes, including chrome tanning and the use of formaldehyde.

Fee, £ 3 135. 6d.

## II. The Chemistry and Physics of Leather Manufacture

Lectures on Tuesdays, at 10.30 a.m., throughout the session.

The anatomical and chemical structure of skin and its constituents; physics of evaporation, drying, heating, and ventilation; the physical chemistry of the limeyard and tannery; theories of the tanning process; chemistry of the tannins and their derivatives; leather analysis; examination and purification of effluents.

Fee, £, 1 115. 6d.

## III. Leather Dyeing, Staining, and Finishing

Lectures, on Thursdays, at 10.30 a.m., during the first term.

Sketch of colouring matters; chemistry of dyeing; nature of light and colour; laws of colour-mixture; the practical methods of leather dyeing and staining.

Fee, £, 1 15.

Students requiring a fuller knowledge of Dyes and Dyeing are advised to attend such lectures in the Dyeing Department as the Professor may recommend.

*Practical Leather Dyeing.* Instruction will be given as part of the Laboratory Course.

#### IV. Currying and Leather Finishing

Lectures on Thursdays, at 10.30 a.m., during the second term.

# Leather Industries

Chemistry of oils and fats; practical currying in connection with the work done in the currying shop. Fee,  $\pounds_{1}$  15.

## V. Technical Microscopy and Bacteriology in Leather Manufacture

Lectures on Thursdays, at 10.30 a.m., during the first half of the third term.

Fee, 10s. 6d.

The delivery of Courses III, IV, and V will be subject to the entry of a sufficient number of students.

## VI. Methods of Laboratory Work

Lectures on Saturdays throughout the session. Fee,  $\pounds_{I IIS}$  6d.

#### Practical Microscopy and Bacteriology

Instruction on these subjects will be given during the session in the laboratory of the Leather Industries department, and will form part of the ordinary laboratory work of students in the department.

Microscopes must, as a rule, be provided by the student, but one or two may be hired of the Department. For bacteriological work each student must be provided with 1/12th oil immersion objective and substage condenser; but for the study of skin and leather only a simpler microscope will suffice.

## LEATHER INDUSTRIES LABORATORIES

The laboratories and workshops will be open during the session from 9.30 a.m. to 1 p.m., and from 2 to 5 p.m., except on Saturday afternoons.

All the ordinary chemicals (except silver nitrate and alcohol) and small quantities of skin and leather for experimental purposes will be furnished by the Department, but larger quantities required for special experiment or research may be charged to or provided by students at the discretion of the Professor.

For fees, see page 118.

#### Courses in Technology

#### Work During Vacation

Students in the Leather Industries Department are referred to page 122. The laboratories of the Department will be open to qualified students for research and private study during a part of the long vacation, but students are strongly recommended to employ the time in gaining practical experience in works wherever such a course is possible. The Professor will be glad to give advice before the end of term as to suitable courses of vacation study and to consider applications from students desiring the use of the laboratories.

## Evening Course

See under Evening Classes, page 339.

# FUEL AND METALLURGY

## Professor Bone

The work of the department will be thoroughly organised during the session 1906-7, and the new laboratories, now in course of erection, will be ready for the reception of students in October, 1907.

Special provision will be made for the investigation of problems connected with the application of gaseous fuels for lighting, heating, and power purposes, and for the scientific training of gas engineers and others preparing for responsible positions in connection with fuel industries (*e.g.*, by-product coking plants).

The Metallurgical courses, besides dealing with general processes for the concentration and extraction of ores, will be chiefly directed to problems underlying blast furnace and open hearth steel practice, and to the microstructure, physical properties, and heat treatment of steel and other industrial alloys.

Whilst special attention will be given to research work in connection with the above, ample provision will also be made for systematic work in photometry, pyrometry, calorimetry, etc., and for the analysis and testing of coals, gases, ores, slags, alloys and other metallurgical products.

#### Fuel and Metallurgy

During the present session temporary provision will be made for the investigation of fuels and gas problems, as well as for gas analysis and manipulation, but as the accommodation is limited, an early application on the part of intending students is desired. It is hoped, in the second term, to offer introductory lecture courses in: (1) The chemistry of gases and the production and applications of gaseous fuels; (2) The principles of blast and reverberatory furnace practice (iron, copper, lead).

In these courses problems for investigation will be fully discussed. Details will be announced later.

The addition of Applied Chemistry (Fuel and Metallurgy) to the subjects for the Ordinary and Honours degree of B.Sc. is under consideration.

# AGRICULTURE<sup>1</sup>

Professor Seton

 Mr. Haydon
 Mr. Archibald
 Dr. Crowther

 Mr. Bowes
 Mr. Stewart
 Mr. Ruston

 Mr. Parton
 Mr. T. Redington
 Mr. Gaut

 Miss
 McKerrow
 Mr. Anstey

The Winter Course will begin on Monday, October 15, when the Vice-Chancellor will admit students from 9.30 a.m. to 12.30 p.m., and from 2 to 5 p.m. All students are expected to register their names on this day. Lectures will begin on Tuesday, October 16.

The Winter Course extends over two terms: the first term begins October 15, and ends December 22, 1906; the second term begins January 7, and ends March 16, 1907. The fee is  $\pounds_{10}$ .

The Summer Course extends over the third term, beginning April 15, and ending June 22, 1907. The fee is  $\pounds 5$ .

Students may reside either in Leeds or in the village of Garforth, which is about three-quarters of a mile from the Farm. They will be required to pay their railway fares between Leeds and Garforth. The cost of a contract ticket

<sup>1</sup> For further details and time-tables of courses of study, see the prospectus of the Department of Agriculture, to be obtained from the Registrar on application.

between Garforth and Leeds during the Winter Course (five months) is  $\pounds 2$  7s., and for students under 18 years of age  $\pounds 1$  3s. 6d.

The courses of study in Agriculture at the University are :

r. A general course designed without reference to the requirements of any examining body.

2. A course for the National Diploma.

3. A course for the B.Sc. degree.

# I and II. General and National Diploma Courses Winter Course

Students may obtain a full course during winter, and are free to devote the spring and summer months to practical farm work.

The instruction has been arranged to meet the requirements of young men who intend to become farmers, land agents, valuers, or teachers of agricultural science.

The complete course extends over three winters, but students may take a one or two winters' course. The complete course prepares students for the examination for the National Diploma in Agriculture, awarded jointly by the Royal Agricultural Society of England and the Highland Society of Scotland. Students are also prepared for the examination of the Surveyors' Institution. Students of the University who have taken the two years' course in Agriculture are admitted to the examinations of the Institution in Sub-Division I, "chiefly Land Agency," without the usual period of pupilage in a land agent's or surveyor's office.

A Laboratory for the exclusive use of Agricultural students has been added to the Department, and will be open on special terms to those who wish to devote their whole time to agricultural chemical analysis.

Practical instruction in Agriculture is provided for at the Educational Farm at Garforth. In addition to the lectures at the University, students must attend regular classes at the Farm, where class-rooms and laboratories have been erected, in which classes will be conducted according as it is found necessary.

## Agriculture

All students taking a full course will be required to follow closely the farm work, including field operations, methods of feeding stock, and progress of experiments.

A Tutor has been provided to supervise the studies of first year students. Tutorial classes will be formed to suit their requirements.

#### Summer Course

A special course has been arranged for students who can devote the summer as well as the winter months to study.

The subjects will comprise agricultural chemical analysis, forestry, horticulture, poultry keeping, farm bacteriology, field surveying and levelling, mathematics, and practical agriculture.

Students reading for the National Diploma are recommended to take the Summer course in their first year.

## III. Degree Course

Students preparing for the degree of Bachelor of Science who take Agriculture as one of their subjects for the Final examination, do not enter the Department of Agriculture until they have passed the Matriculation and Intermediate examinations and begin the work for the Final examination. The subjects of examination and attendance conditions will be found under the Regulations for the degree of B.Sc., p. 202.

#### LECTURE COURSES

## First Year

## I. Agriculture

Professor Seton

Tuesdays, Wednesdays, and Thursdays, at 9.30 a.m.

The lectures will deal especially with soils, manures, rotations, seeds, grasses, and pastures.

## II. Physics and Chemistry

Tuesdays, Wednesdays, and Thursdays, at 10.30 a.m.

Physics and Chemistry so far as is sufficient to enable students to understand thoroughly the application of these sciences to agricultural practice.

## III. Tutorial Classes

Tuesdays, Thursdays, and Fridays, at 11.30 a.m.

Correspondence, calculations, elementary mathematics preparatory to book-keeping, surveying, and engineering.

#### IV. Chemical Laboratory

Mondays and Wednesdays, from 2 to 5 p.m.

Selected experiments arranged to illustrate the chemical and physical principles underlying agricultural operations.

## V. Practical Agriculture

Tuesday and Friday afternoons, at Garforth.

Stock; stock-feeding; estimation of weights of crops and animals; pastures, pasture plants; practical examination of seeds, manures, and feeding stuffs.

Seasonable operations will be closely followed; different systems will, so far as practicable, be illustrated, and the reasons for the variations explained. Students will be required to closely follow stock-feeding and other experiments at Garforth. Occasional demonstrations will be given by specialists in certain departments of practical agriculture.

#### VI. Natural History

In the Department of Biology. (See p. 242).

# Second and Third Years

## VII. Agriculture

## Mr. HAVDON and Mr. ARCHIBALD

Lectures daily, except Saturdays, at 10.30 a.m.

Feeding stuffs; crops and cropping; live stock; labour and implements; agricultural economics.

#### VIII. Chemistry

## Dr. Crowther

Mondays, Tuesdays, and Thursdays, at 9.30 a.m.

The chemical elements; the atomic and molecular theories; atomic and molecular weights; chemical combination; the chemistry of the more common elements and of their most important compounds; the chemistry of carbon and of some typical carbon compounds important in agriculture; chemistry of fermentation.

## Agriculture

# IX. Agricultural Chemistry Dr. CROWTHER

Wednesdays, Thursdays, and Fridays, at 11.30 a.m.

The plant; the soil; manures; crops; animal nutrition; the dairy.

## X. Book-keeping

Mondays at 11.30 a.m., and Fridays at 9.30 a.m.

Accounts, day book, cash book, ledger, balance sheet, profit and loss account, &c.

## XI. Mathematics

Wednesdays at 9.30 a.m.

This class will be largely tutorial. The subjects taken will be arranged to suit the requirements of the student. In addition to Mathematics as required for examination the course will include practice in all calculations that an agriculturist would be required to make in the course of a year.

#### XII. Chemical Laboratory

Tuesdays, 10.30 a.m. to 12.30 p.m.; Thursdays, 2 to 4 p.m.; Saturdays, 9.30 a.m. to 12.30 p.m.

Chemical analysis, with special reference to Agriculture.

#### XIII. Veterinary Science

Mr. Bowes

Mondays, Tuesdays, Wednesdays and Thursdays at 9.30 a.m.

Anatomy and physiology of farm animals; recognition of diseases affecting farm animals; means of preventing disease, including ventilation, drainage, judicious feeding, grooming; nature of heredity, contagion, infection.

## XIV. Practical Agriculture

Classes at the Farm on the same lines as for first year students, with the addition of practical demonstrations by Mr. Bowes on conformation, handling, &c., and generally the application of veterinary hygiene to farm animals.

## XV. Surveying

Mr. ARCHIBALD

Mondays at 9.30 a.m. and 4 p.m.

Revision classes for those students who have taken this subject in the summer term.

## XVI. Agricultural Botany

In the Department of Biology. (See page 242.)

#### XVII. Economic Entomology

In the Department of Biology. (See page 241).

## XVIII. Geology

In the Department of Geology. (See page 245).

#### XIX. Agricultural Engineering

In the Department of Engineering. (See page 249).

## Summer Course

#### XX. Dairying

Mr. HAYDON

Tuesdays, Thursdays and Fridays at 9.30 a.m.

Commercial aspects; quantity and quality of milk; butter-making; manufacture of Cheddar, Stilton, Cheshire and Wensleydale cheese; utilization of by-products; general management of the herd; live and dead stock and buildings required on cheese-making farms; dairy bacteriology.

#### XXI. Practical Agricultural Chemistry

Dr. CROWTHER.

Mondays and Thursdays at 2 p.m. Qualitative and quantitative analysis.

#### XXII. Horticulture

Mr. T. REDINGTON

Tuesdays at 10.30 a.m.

Preparation of the soil; manure; seeds and their treatment; garden crops; fruit culture; the flower garden.

## XXIII. Poultry Keeping

Mr. PARTON

Mondays and Wednesdays at 11.30 a.m.

Breeds and their characteristics; the anatomy of the fowl; embryology of the chicken; incubation; rearing chickens; foods; methods of fattening; marketing produce; diseases of poultry.

## XXIV. Surveying

## Mr. Archibald

Tuesdays, Thursdays, and Fridays at 11.30 a.m.

Students will be required to make a survey of a part of the Manor Farm, Garforth, and to plot the same in the office. In addition to chain, compass, theodolite, and level, students will have an opportunity of using other instruments.

#### XXV. Forestry

In the Department of Biology. (See page 242).

# County Lecture Courses

For particulars of instruction given in connection with the County Councils of the three Ridings of Yorkshire, see page 343.

GENERAL TIME TABLE

	9.30—10.30.	10.30—11.30.	11.30-12.30.
Monday.	Greek V. Latin II. German IV. History IX. Math. IV and VII. Chem. V B a. Chem. V C b c. Biology I B c. 9.30-11.30. Biol. IX c. Geology XII b c. Engineering II A. Mining II. 9.30-11.30. Text I (and year). Agric. VIII, XIII and XV a b.	Greek VI. Latin I. Eng. II and IV A. German VIII. Final Law I. Physics III. Biol. I A and II a b. Biol. I B b. 10. 30-12.30. Biol. VII a b. Engineering VI. Leather Ind. I. Agric. I and VII a b.	Greek II. Latin III. French II. History II. Final Law II. Mathematics VI. Chemistry I. 12. Chem. V A a b. Geol. IX a b. Elect. Eng. IV. Text. II (2nd yr.) a b. Agric. X a b. Agric. XXIII c.
Tuesday.	Greek IV. Latin V. History VI & VII. Education II. Physics I. Chem. III and VD. 9.30-12.30. Biol. I A a, II a (Pract.), and I B b. Engineering IV. 9.30-11.30. Text. I (1st year). Dyeing I a and II b. Agric. I, VIII & XIII a b. Agric. XX c.	Greek VI. Latin II (Comp). History I and IV. Education III A. Final Law III. 10.30-12.30. Biol. II (Pract.) b. Engrg. VII A a b. Engrg. VII c c. Leather Ind. II. Agric. II & VII a b. 10.30-12.30. Agric. XII a b.	Latin III and IV (Comp.). English I. 12. Chemistry IV. Text. II (1st yr.) a b. Agric. III a b. Agric. XXIV c
Wednesday.	Greek V. Latin II. German IV. History IX. Math. IV and VII. Chemistry V B a. Chemistry V B a. Chemistry V C b c. Biology I B c. 9.30-11.30. Biology IX c. Geology XII 4 c. Engineering II A. Mining II. 9.30-12.30. Textile VIII (1st and 3rd years). Agric. I, XI and XIII a b.	Greek VI. Latin I. English II and IV A. German VIII. Physics IV. Biol. I A and II a b. Biology I B b. Engineering VI. Leather Industries I. Agric. II & VII a b.	Greek I. Latin III. French II. History II & VIII. Mathematics VI. Chemistry I. 12. Chem. V A a b. Biology VII a b. Geology IX a b. Agric. IX a b. Agric. XXIII c

a-1st Term. b-2nd Term. c-3rd Term.

# DAY CLASSES

2—3.	3—4.	4—5.	5—6.			
French IV. German I. History V. Economics I. Inter. Law I. Math. I and III. 2-5. Biol. IA (Pract.) 2-4. Biol. VIII a b. Geology II. Engrg. II B a b. Elect. Eng. IV. Mining I. 2-5. Text. I (2nd yr. 2-5. Agric. IV a b.) Aglic. XXI c.	Greek III and IV. French I. German VI. History XV. Inter. Law III. Mathematics II. Physics II. (Exercise Class).	Latin IV. French III and VII. German II. Education I. Inter. Law II. Mathematics V. Engineering I. Engrg. II c a c. Elect. Eng. II. Agric. XV a b.	5.30-7, Engrg, II (Lab.).			
Latin I (Gram.) German VII. History XI. 2-5. Pract. Chem. 2. Biology I B c. 2-4. Geol. IX (Pract.) a b. 2-5. Text. I (1st yr.). 2-4. Text. III.	French V æ b. French VI c. German VI. Economics III. 3-5. Biol. I B c.	German V. Economics II. Geology XI & c. Engineering III. Elect. Eng. III. Text. IV (2nd yr. a &. Dyeing III a &. Dyeing IV c.				
French IV. German I. Philosophy I. Economics I. Math. I and III. 2-4. Biol. VIII <i>a b.</i> Geology II. Engrg. II B <i>a b.</i> 2-4. Text. VIII (1st and 3rd years). 2-5. Agric. IV <i>a b.</i>	Greek III. French I. German III. Education III B. Economics III (1st year). Mathematics II. Physics II. 3-5. Textile VIII (1st year).	Latin IV. French III and VII. German II. Education I. Economics III (and year). Inter. Law II. Mathematics V. Physics II. Engineering I. Textile IV (rst year) a b.				

Classes not marked meet throughout the Session.

GENERAL TIME TABLE

	1		
	9.30-10.30	10.30—11.30.	11.30—12.30.
Thursday,	Latin V. Hist. VI and VII. Education II. Physics I. Physics I. (Exercise Class). Chemistry III. Engineering IV. 9.30-12.30. Elect. Eng. IV. 9.30-12.30. Text. I (1st year). 9.30-12.30. Text. VIII (2nd and 3rd years). Dyeing I a & II b. Agric. I, VIII and XIII a b. Agric. XX c.	Greek VI. History I and IV. Education III A. Final Law I. Engrg. VII A a b. Engrg. VII c c. Leather Ind. III a. Leather Ind. IV b. Leather Ind. V c. Agric. II & VII a b.	Latin I (Comp). Final Law II. 12. Chemistry IV. Biol. I A (Revision)c. Biology V a. Engineering VIII b. Text. II (1st year) a b. Agric. III & IX a b. Agric. XXIV c.
Friday.	Greek V. Latin II. German IV. History VIII. Math. IV and VII. Chemistry II. Chemistry II. Chemistry V B a. Chem. V c b c. 9.30-11.30. Biol. I A (Revision) c. 9.30-11.30. Biol. VI ab. Geology XII b c. Engineering II A. Mining II. Text, III ab. Agric. IX a b. Agric. IX a c.	Greek IV. Latin I. Engl. II and IV A. German VIII. Final Law III. Physics III. Biology I A a. Biology I B b. Biology II a b. Engineering VI. 10. 30-12. 30, Text. I (2nd year). Leather Ind. I. Agric. VII a b.	Greek I. Latin III. French II. Mathematics VI. Chemistry I. 12. Chem. V A a b. Geology IX a b. Agric. III & IX a b. Agric. XXIV c.
Saturday.	Greek I. Latin V. Education I a. 9.30-12.30. Gen. Elem. Sci. (Phys. & Chemistry). Physics I (Exercise Class). Chemistry III. 9.30-12.30. Biol. X. Engineering VIII a. 9.30-12.30. Agric. XII a b.	Latin V (Comp.). 10.15-12.15, French IX and X. 10.15-12.15, German IX and X. Engineering IV. Engineering VII B.	Greek VI (Comp.). 12. Chemistry IV. Engineering III.

a-1st Term b-2nd Term. c-3rd Term.

DAY CLASSES. (Continued.)

2-3.	3-4.	4-5.	5—6.
English I b c. German VII. History XI. Education III a b. Education VIII. 2-5. Prac. Chem. 2. Biol. I B c. Eng. II B a b. 2.5. Text. I (1st yr.). 2-4. Textile VII. (2nd and 3rd years). 2-4. Agric. XXI a b. Agric. XXI c.	German VI. 3-15-4-45. Education I, II and III (Criticism). Economics III. 3*5. Biology I B c.	Economics II. Engineering III. Elect. Eng. I. Text. V (2nd yr.) a b. Dyeing III a b. Dyeing IV c.	Education VIII.
French IV. German I. Philosophy I. Economics I. Math. I and III. 2-4. Biology II (Pract.) b. Biol. VIII a b. Geology II. Elect. Eng. I. 2-5. Text. I (2nd yr.).	Greek III. Gk. IV (Comp.). French I. German III. Mathematics II. Physics II.	Latin IV. French III & VII. German II. Education I. Mathematics V. Physics II. Engineering I. Elect. Eng. IV. Text. V (1st year) <i>a b</i> .	

Classes not marked meet throughout the Session.

	9.30.	10.30.	11.30.	2.	3.	4-
MONDAY	Latin.	English Literature.	Ancient History. French II. Chem.	Mathematics.	Greek. German. Physics.	French III.
TUESDAY		Latin Comp.				
WEDNESDAY	Latin.	English Literature.	Ancient History. French II. Chem.	Logic. Mathematics.	Greek. German, Physics,	French III. Physics.
THURSDAY	Physics.					
FRIDAY	Latin.	English Literature.	French II. Chemistry.	Logic. Mathematics.	Greek. German. Physics.	French III. Physics.
SATURDAY	14.1			(44)		

## TIME TABLE OF INTERMEDIATE ARTS COURSES

The time for the English Language and Modern History Classes to be arranged with Students.

# TIME TABLE OF FINAL ARTS COURSES

Monday Greek. † Ger European H Mathematic	ist. † English Literature.	Latin. * Mathematics.	French. European Hist. * Economics. *	Greek. *	Latin. † Education. * Mathematics. *
TUESDAY Grk.* Grk. & Hist. † Educa		Latin Comp. * †			German Literature (1st and 2nd terms).
WEDNESDAY Greek. † Ger European H Mathemati	ist. † English Literature.	Latin. * English Hist. † Mathematics.	French. Economics. †	Education. ‡	Latin. † Education. * Mathematics. *
THURSDAY Greek an Roman Hist Education	ory. † European Hist. *		Education Disc. Class (1st and 2nd terms).	3.15-4.45. Education Criticism Lessons.	
FRIDAY	st. † Fuglich Literature	Latin. * Mathematics.	French. Economics. *	Greek Comp. *	Latin. † Education. * Mathematics. *
SATURDAY Education (1st term					

First Year. † Second Year. ‡ Third Year. Greek Composition, one hour, second year. English Literature and Language, one hour. \* First Year.

At times to be arranged :--Economics, second year. Psychology, three hours.

History of Ancient Philosophy, three hours.

Time Tables of, Arts Courses

# Course for the First Examination in Medicine Time Table—First and Second Terms

	9.30—10.30.	10.30—11.30.	11.30-12.30	2.0-3.0.	3.0-4.0.	4 <mark>.</mark> 0—5.0.
Mon.		Zoology Lect.	Chem. Lect. (Gen. C.)	Zoology (L	aborator <b>y</b> W	ork) 2.0 -5.0
TUE.		boratory Work boratory Work		Chemic	al Laborator	y, 2.0—5.0
WED.		Zoology Lect.	Chem. Lect. (Gen. C.)	Chem. Tutorial.		Physics Lect.
Тнυ.	Physics. Lect.		-	Chemic	al Laborator	y, 2.0—5.0
FRI.		Zoology(Lect.) †Botany(Lect.)		Chem.	Lab. 2-4.	Physics Lect
SAT.	Physic	al Laboratory	9.30-12.30			

\* 1st Term. † 2nd Term.

Inird Ierm						
	9.30-10.30.	10.30—11.30	11.30—12.30	2.03.0.	3.0—4.0.	4.0-5.0.
Mon.	Botany.	Botany Lab.	Chem. Lect.	Chemic	al Laborator	у, 2.0—5.0
TUE.	Chemical	Laboratory,	9.30-12.30	Botany Lect.	Botany Lab	y., 3.0—5.0
WED.	Botany.	Botany Lab.	Chem. Lect.	Chem. Tutorial.		Phys. Lect.
Тнџ.	Phys. Lect.	Chem. Tutorial.	Zool, Revn.	Botany Lect.	Botany Lab	y., 3.0—5.0
Fri.	Zool. Revn. 9.30-	Laboratory. 11.30.	Chem. Lect.	Chem.	Lab. 2-4.	Phys. Lect.
SAT.	Physical	Laboratory,	9.30—12.30			

This Course will meet the requirements of students preparing for the First examination in Medicine of the University of Leeds. It includes lectures in Chemistry, Physics, Zoology and Botany, with the requisite attendance in the Chemical, Physical, and Biological laboratories.

Composition fee for the course, including Union fee (excluding Zoological Revision Class)  $\pounds_{26}$  10s. 6d.

Students preparing for the Conjoint Board Examinations (L.R.C.P. and M.R.C.S.) will attend classes in Physics (lectures and laboratory as above), Chemistry (lectures and laboratory as above), and Biology (see page 240). Composition fee for the course (including Entrance fee and Union fee),  $\pounds 22$  17s. od.

# THE UNIVERSITY OF LEEDS Session 1906-1907

## The School of Medicine

## UNIVERSITY TERMS

The University session or academic year in the School of Medicine is divided into three terms. The first term begins Monday, October 1,1906, and ends Saturday, December 22, 1906; the second term begins Monday, January 7, 1907, and ends Wednesday, March 27, 1907; the third term begins Monday, April 22, 1907, and ends Saturday, July 13, 1907.

The terms for students pursuing the first year's course of study are the same as those in other Faculties (see page 115).

#### ADMISSION OF STUDENTS

The Dean will enter students in the School of Medicine for their courses of lectures from 9.30 to 10.30 a.m., from October 1 to 3, 1906; and from April 22 to 24, 1907. At the same time, fees will be received by the Registrar.

The Dean attends at his office, in the School of Medicine, from 9 to 10 a.m. daily, and can be seen at other times by appointment. Enquiries about medical studies should be addressed to him.

Applications to attend the instruction on Infectious Diseases at the Leeds City Hospitals, and to attend instruction in Vaccination, must be lodged with the Dean in the first week of each term.

Enquiries relating to attendance at the Infirmary should be addressed to the Secretary of the Faculty of the General Infirmary, Mr. Walter Thompson, 4, Park Square, between the hours of 11 a.m. and 1 p.m.

Every student is required on entering the School to sign the following declaration :

I, the undersigned, being a student in the School of Medicine of the University of Leeds, hereby undertake to comply with all rules and regulations of the University, and to conduct myself on all occasions in an orderly manner. I fully understand that no allowance whatever will be made, and that I have no claim upon the Council of the University in respect of any fees paid by or due from me, in case such fees are forfeited by any irregularity or misconduct on my part. Students pursuing the first year's course of study are admitted at College Road according to the arrangements published on page 115.

## ENTRANCE EXAMINATIONS

## I. For students preparing for the M.B., and Ch.B. Degrees in the University of Leeds

All students who intend to present themselves as candidates for the degrees of M.B. and Ch.B. in the University of Leeds are required, before entering upon their degree course, to have passed the Matriculation examination (Faculty of Medicine) of the Universities of Manchester, Liverpool, Leeds, and Sheffield, or some examination recognised by the Joint Matriculation Board of those Universities as exempting from the Matriculation examination.

The Matriculation examination (Faculty of Medicine) is held at each University in July and September. Candidates presenting themselves for this examination are required to satisfy the Examiners in :

- 1. English (Language or Literature), and English History
- 2. Mathematics
- 3. Latin
- 4. *Two* of the following, *one* of which must be a language :

## i. Greek

- ii. French
- iii. German
- iv. Some other modern language approved by the Board
- v. Elementary Mechanics
- vi. Chemistry

vii. Geography or Natural History

Candidates who have passed the Matriculation examination in five subjects, but have not included both Latin and either Greek or a modern language, will be deemed to have passed the Matriculation examination (Faculty of Medicine), provided they satisfy the Examiners in the subject omitted.

K

Candidates for entrance to the Faculty of Medicine who have already obtained the certificate of having satisfied the Examiners in English subjects, Mathematics, Latin, and another language, will be deemed to have passed the Matriculation examination (Faculty of Medicine), provided they satisfy the Examiners in one other subject in the Matriculation examination.

The following are the conditions of exemption :

I. The Board will grant exemption from the Matriculation examination to graduates of any University of the United Kingdom, provided Latin has formed part of one of the degree examinations.

2. Provided that the certificate shows that all the subjects required by the General Medical Council have been included, the Board is prepared to receive applications for exemption from persons who hold certificates of having passed

- i. The London Matriculation examination.
- ii. The examination for Higher Certificates held by Oxford and Cambridge Schools Examination Board.

Certificates must show that the candidate has satisfied the Examiners in Latin, Elementary and Additional Mathematics, English *or* History, and in two other subjects included among the subjects of the Matriculation examination, of which *either* Greek, French, *or* German shall be one.

iii. The Senior Oxford Local examination (with Honours).

Certificates must show that the candidate has satisfied the Examiners in Latin, Pure Mathematics, English Essay, English History, and in two other subjects included among the subjects of the Matriculation examination, of which *either* Greek, French, German, *or* Spanish shall be one.

iv. The Senior Cambridge Local examination (with Honours).

Certificates must show that the candidate has satisfied the Examiners in Latin, Geometry and Algebra, English Composition and English History, and in two other subjects included among the subjects of the Matriculation examination, of which *either* Greek, French, German, or Spanish shall be one.

3. The Board will exercise its discretionary power of granting exemption to applicants holding certificates of having passed examinations of a standard at least equal to those above mentioned.

A complete syllabus of the examination may be obtained from the Secretary, the Joint Matriculation Board, Owens College, Manchester, to whom all applications for exemption should also be addressed.

#### 2. For other Students

Students who intend to pursue the study of Medicine without becoming candidates for the degrees of M.B. and Ch.B. in the University of Leeds are admitted to the Leeds School of Medicine on presenting certificates of having passed one of the preliminary examinations recognised by the General Medical Council. The Joint Matriculation Board of the Universities of Manchester, Liverpool, Leeds, and Sheffield issues such a certificate to candidates who have satisfied the examiners at the Matriculation examination (see above) in English subjects, Mathematics, Latin, and another language, although they may not have passed the examination. This certificate does not entitle the candidates to proceed to degrees in any of the Universities.

Candidates for the Medical degrees of the University of London must satisfy the Matriculation requirements of that University before beginning a course of study in the Leeds School of Medicine.

#### FEES

All fees are payable in advance to the Registrar. Cheques should be made payable to "The University of Leeds," and crossed "Beckett & Co."

I. and 2. Entrance and University Union Fees As in the other Faculties. See page 117.

#### 3. Lecture and Laboratory Fees

The general regulations, as well as the special regulations for lecture, laboratory, and research fees, are the same as in the other Faculties (see page 117). The following are the composition fees for students preparing for University degrees in Medicine :

i. For the complete course qualifying for the First M.B. examination of the University, or the Preliminary Scientific (M.B.) examination of the University of London, the fee is  $\neq$ , 26, exclusive of Entrance and Union fees.

ii. For students preparing for University degrees, who have already taken the course of instruction for the First M.B. examination of the University, or the Preliminary Scientific (M.B.) examination of the University of London, the fee is  $\pounds_{71}$  os. 6d. if paid in one sum on entrance, or  $\pounds_{36}$  11s. on entrance and  $\pounds_{36}$  11s. at the end of twelve months, and entitles to attendance upon one course of the subjects in Sections I and II. The privilege extends over six years only from the date of the first instalment.

iii. For students preparing for University degrees who have passed the Second M.B. examination (Anatomy, Physiology, and Materia Medica), the fee is  $\pounds_{43}$  is., and entitles to attendance upon one course of the subjects in Section II. The privilege extends over four years only.

Descriptive Anatomy, Junior and Senior Sections. Use of Dissecting Room with tutorial instruction for two sessions. Physiology, general and advanced courses. Practical Physiology and Histology. Materia Medica. Section II.	ology and Bacteriology. tical Pathology. icine. Do. a second course. ery. tical Surgery. etrics. ecology. nsic Medicine. tical Toxicology. tal Diseases. thalmology. ic Health. ied Anatomy.
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Additional courses of lectures and practical or tutorial classes which may be rendered necessary by failure to pass any examination, or by the refusal of the Board of the Faculty of Medicine to certify satisfactory attendance on any course, will be charged for as the Board may direct.

### 4. Examination Fees

No fee will entitle to admittance to more than one examination.

For the First examination for the degrees of M.B. and Ch.B.,  $\pounds_5$ ; and for each subsequent examination,  $\pounds_2$ .

For the Second examination for the degrees of M.B. and Ch.B.,  $\pounds_5$ ; and for each subsequent examination,  $\pounds_2$ .

For the Final examination for the degrees of M.B. and Ch.B.,  $\pounds_5$ ; and for each subsequent examination,  $\pounds_2$ .

For the examination for the degree of Ch.M.,  $\pounds_5$ ; and for each subsequent examination,  $\pounds_2$ .

## Regulations

For the examination for the diploma in Public Health,  $\pounds_5$  5s. for each part, and for each subsequent examination in the same part,  $\pounds_3$  3s.

On application for the degree of M.D.,  $\pm 5$ .

#### 5. Degree Fees

On conferment of the degree of Ch.M. or M.D.,  $\pounds 5$ .

## REGULATIONS FOR STUDENTS

1. All students are required to enrol their names at the Dean's office within five days from the beginning of each session. Students who from any unavoidable cause are prevented from personally attending at that time must communicate with the Dean by letter.

2. Should a student change his residence during the session, he must inform the Dean of the change of his address without delay.

3. Regular, punctual, and orderly attendance at lectures, demonstrations, and class-examinations is required of every student, in order that he may obtain certificates of attendance. In the case of persistent neglect of work, repeated failure at professional examinations, or unreasonable delay in presenting himself for such examinations, a student may be required to withdraw from the University.

4. In case of illness or other unavoidable cause of non-attendance at any lecture, demonstration, or class examination, a written explanation accompanied, when necessary, by a medical certificate, must be sent to the lecturer, with as little delay as possible, otherwise excuses for absence cannot be accepted. Hospital work is not counted as an excuse for non-attendance upon lectures excepting in the case of the week's casualty dressership and for attendance upon actual cases of midwifery, all of which must be duly certified.

5. Prizes will be granted only when the work and conduct of the student are satisfactory, and certificates or prizes may be refused on the ground of unsatisfactory conduct.

6. Smoking is allowed only in the Students' Common Room, the Refectory after 1 p.m., and under certain restrictions in the Dissecting Room.

## School of Medicine

7. Students will be required to make good, to the satisfaction of the Council, any loss, wilful damage or injury they may occasion to the property of the University.

8. Students in the School of Medicine are amenable to the discipline and general regulations of the University (see page 121), as well as to the rules made by the Board of the Faculty of Medicine. Violation of these regulations and rules renders a student liable to immediate dismissal, and to the forfeiture of all fees, certificates, and privileges as a student of the University.

#### Lockers

Lockers are provided for the safe keeping of coats, books, &c. The rent is 2s. 6d. per annum, commencing October 1 or May  $\tau$ , with a deposit of 1s., which will be returned when the key is given up, if the locker is undamaged.

#### Residence

See particulars of Hall of Residence (page 123), and Registered Lodging and Boarding Houses (page 124).

### Refectory

A well-appointed Refectory, which is open daily, excepting Saturdays, has been provided in the School of Medicine. It is under the combined management of the Board of the Faculty of Medicine and of the Students' Representative Council. Dinner is served from 12 to 2 p.m. Tea, coffee, and light refreshments may be obtained until 5 p.m.

Dinners for each separate term may be compounded for by special arrangement.

### LIBRARY

## Honorary Librarian : Professor TREVELYAN Assistant Librarian : W. MERRIMAN

The Library contains a valuable collection of books, composed of the united libraries of the School of Medicine and of the Leeds and West Riding Medico-Chirurgical Society, and is being continually increased. The Library of the Old Infirmary, rich in medical classics, became the property of the School of Medicine in 1865.

294

#### Rules

I. The Library is open to students daily, between the hours of 9 a.m. and 5 p.m., except on Saturdays, when it will be closed at I p.m. During these hours, books can be obtained for use in the Library on application to the Assistant Librarian.

2. Students wishing to borrow books for home use are allowed to do so under the following regulations :—

(a) Every student wishing to take books away from the Library shall deposit half-a-guinea as caution money; this sum, or the balance of it remaining, shall be refunded to the depositor on the return of his Library card.

(b) The student will, on payment of the deposit, receive a Library card with his name upon it. This card must always be presented to the Assistant Librarian or his substitute whenever the student desires to borrow a book. The name of the book and date of issue will be entered upon the card, which will then be placed on the shelf in the place of the book borrowed. The card will be given back to the student when the book is returned.

(c) Books borrowed for home use must be returned to the Library within two weeks from the date of issue. One volume only can be borrowed at a time. A fine of 2d. a day is incurred for every day that it has been detained beyond the time allowed.

(d) No periodical for the current year may be removed from the Library.

(e) In case of loss of or damage to any book, the loss or damage must be made good by the borrower.

(f) Every book must be returned to the Library at the end of each term.

NOTE.—Practitioners residing in Leeds or its neighbourhood may be admitted to the use of the Library upon certain conditions, and upon the payment of a subscription.

### MUSEUMS

The MUSEUM OF PATHOLOGY contains, in addition to preparations illustrating the ordinary pathological processes, many rare specimens, some of historical interest. It draws largely for its supply from the General Infirmary, as well as from other institutions in the City. A collection of microscope sections from specimens in the Museum is available for the use of students on application.

A complete type collection of MATERIA MEDICA specimens is also placed here for the convenience of students.

The ANATOMY MUSEUM AND BONE ROOM adjoins the Dissecting Room, and has been fitted up, under the

direction of the Professor of Anatomy, with a valuable collection of specimens specially arranged for study, which are also used in illustration of the lectures on Anatomy. Amongst them are a complete set of bones marked with the muscular attachments, and mounted in revolving cases ; and several series of wax models, illustrating the development of the foetus.

A collection of OLD INSTRUMENTS, Surgical, Obstetrical, and Medical, of disused type or of historical value, is being formed. Many of considerable interest have already been obtained, and additional contributions will be gladly received by the Hon. Curator, Professor Wright.

# DEGREES IN MEDICINE AND SURGERY

The Degrees in Medicine and Surgery shall be :

Bachelor of Medicine and Bachelor of Surgery Ordinance. (M.B. and Ch.B.)

Doctor of Medicine (M.D.)

Master of Surgery (Ch.M.).

# Degrees of Bachelor of Medicine and Bachelor of Surgery

Candidates for the degrees of Bachelor of Medicine and of 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 subsequently to the date of passing the First examination.

During the first four years, a year of medical study must Regulations include attendance upon at least two of the prescribed courses of lectures or laboratory work, or one such course and hospital practice, in each term, if that year is to count as part of the degree course. In the fifth year clinical work will suffice. The attendance must be given at the University or at a college, medical school, or hospital recognised by the University.

Candidates for the degrees of Bachelor of Medicine Ordinance and of Surgery are required to satisfy the Examiners in the several subjects of the following examinations, entitled respectively:

The Matriculation examination,<sup>1</sup> or such other examination as may have been recognised by the Joint Matriculation Board of the Universities of Manchester, Liverpool, Leeds. and Sheffield in its stead; the First examination; the Second examination; the Final examination.

<sup>1</sup> For particulars of the Matriculation examination, see page 289.

## First Examination<sup>1</sup>

Ordinance.

The First examination shall consist of two parts :

PART I. Physics

Chemistry.

PART II. Biology.

Candidates will be allowed to pass the two parts separately. Candidates, before presenting themselves for the First examination, are required to furnish certificates of having attended courses of instruction in accordance with the Regulations of the University, and to have passed the Matriculation examination.

Candidates who have passed the Intermediate examination for the degree of Bachelor of Science in Chemistry, Physics, and Biology will, on payment of the required additional fee, be regarded as having passed the First examination for the degrees of Bachelor of Medicine and Bachelor of Surgery.

The names of candidates who have satisfied the Examiners in either part of the First examination shall be published in alphabetical order.

Regulations.

Candidates for the First examination are required to furnish certificates of having attended during at least one year the following courses of instruction either in the University or in an institution recognised for this purpose by the University :

- 1. Chemistry, Inorganic and Organic : lectures and laboratory work.
- 2. Biology (Zoology and Botany) : lectures and laboratory work.
- 3. Physics : lectures and laboratory work.

The examination will include laboratory work in the three subjects.

## Second Examination?

Ordinance.

The Second examination shall consist of two parts: PART I. Anatomy

# Physiology.

PART II. Materia Medica

## Pharmacy.

<sup>1</sup> This examination is held twice in each calendar year. In 1907, it will begin on Monday, June 10, and Tuesday, September 17. The latest days for entry will be May 1 and September 1, respectively. <sup>2</sup> This examination is held twice in each calendar year. In 1907 it will begin on Friday, March 15, and Monday, July 1. Notice must be given and fees paid fourteen days before these dates.

Candidates will be allowed to pass the two parts separately.

Candidates, before presenting themselves for the Second examination, are required to furnish certificates of having attended courses of instruction in accordance with the Regulations of the University, and to have passed the First examination.

The names of candidates who have satisfied the Examiners in either part of the Second examination shall be published in alphabetical order.

Candidates for the Second examination are required to have Regulations. passed the First examination, and to have attended complete courses of instruction, approved by the University, in Anatomy and in Physiology during four terms; in Materia Medica and in Pharmacy for one term. The certificates must shew (1) that dissection has been practised during five terms at least; (2) that laboratory instruction, approved by the University, has been received in Physiology; (3) that practical instruction, approved by the University, has been received in Materia Medica and Pharmacy.

### Subjects of examination

Part I.

Anatomy. Candidates may, at the discretion of the Examiners, be required to perform actual dissection.

Physiology includes laboratory work in Physiological Chemistry, Histology, and Experimental work.

PART II.

Materia Medica and Pharmacy. Candidates will be required to recognise drugs, and to compound medicines.

Candidates may pass in each part separately.

Candidates who fail to satisfy the Examiners in Part I or Part II must before being readmitted to examination produce evidence of having pursued such further study as may have been required by the Examiners.

#### Final Examination<sup>1</sup>

The subjects of the Final examination are as follows :

Ordinance.

i. Pharmacology and Therapeutics

ii. Pathology and Bacteriology

<sup>1</sup> This examination is held twice in each calendar year. During the present session it will begin as follows: Part I on Friday, March 15, 1907, and Monday, July 1, 1907; Part II on Monday, December 10, 1906. and Monday, July 1, 1907. Notice must be given and fees paid fourteen days before these dates.

Degrees in Medicine and Surgery

- iii. Forensic Medicine and Toxicology and Public Health
- iv. Obstetrics and Gynæcology
- v. Surgery : Systematic, Clinical and Practical
- vi. Medicine : Systematic and Clinical, including Mental Diseases and Diseases of Children.

Candidates may either present themselves in all the six subjects of examination on the same occasion, or may pass the examination in two parts, the first part consisting of two or three of the subjects i, ii, and iii; the second part consisting of the remaining subjects.

Candidates who fail to satisfy the Examiners in the first part must either present themselves again in the subjects as selected, or in all the three subjects of the first part, or in all the six subjects of examination.

Candidates, before presenting themselves for the first part or the second part of the Final examination, are required to have passed the Second examination. and to furnish certificates of having attended courses of instruction, in accordance with the Regulations of the University.

Candidates for the first part of the examination must have completed the eleventh term of medical study in accordance with the Regulations of the University.

Candidates for the second part of the examination, or for the whole examination, must have completed the fifth year of medical study in accordance with the Regulations of the University.

The names of candidates who have satisfied the Examiners in the first part of the Final examination shall be published in alphabetical order.

The names of candidates who have satisfied the Examiners in all the subjects of the Final examination, and are recommended for degrees, shall be published as follows:

1. Those awarded First Class Honours

2. Those awarded Second Class Honours

3. Those who have satisfied the Examiners.

The names shall be in alphabetical order in each case.

300

### Certificates of attendance

Candidates, before presenting themselves for the first Regulations. part or the second part of the Final examination, are required to have passed the Second examination, to have completed the eleventh term or the fifth year, as the case may be, of medical study, and to furnish certificates of having attended courses of instruction, approved by the University, in the University, or in a medical school recognised for this purpose by the University, in the subjects in which they offer themselves for examination.

Candidates are required to furnish certificates as follows :

A. Of having attended courses of instruction, approved by the University, in the University or in a medical school or hospital recognised for this purpose by the University, in the following subjects :

- 1. Pharmacology and Therapeutics, one term.
- 2. Pathology and Bacteriology, three terms.
  - The certificate in Pathology and Bacteriology must in all cases testify that the candidate has attended a course of laboratory instruction in these subjects, approved by the University.
- 3. Forensic Medicine, one term.

The certificate in Forensic Medicine must in all cases testify that the candidate has attended a course of practical instruction in Toxicology, approved by the University.

- 4. Public Health, one term.
- 5. Obstetrics and Gynæcology, two terms.

The certificate in Obstetrics and Gynæcology must in all cases testify that the candidate has attended a course of practical instruction approved by the University, in the use of obstetrical and gynæcological instruments.

- 6. Systematic Surgery, two terms; Practical Surgery, two terms.
- 7. Systematic Medicine, four terms.

The certificate in Medicine must in all cases testify that the candidate has attended, during one term in each case, courses of instruction approved by the University in (a) Mental Diseases; (b) Infectious Diseases.

- B. In respect of Hospital work.
  - 1. In Medicine and Surgery, of having attended the medical and surgical practice of a hospital or hospitals, approved by the University, during at least three years, of which years two at least must be subsequent to the date of passing the Second examination, except when exemption has been granted by the Senate, after report from the Board of the Faculty of Medicine. Clinical Medicine, two years of clinical lectures. Clinical Surgery, two years of clinical lectures.
  - 2. In Pathology and Morbid Anatomy, of having attended during at least twelve months demonstrations in the post-mortem room of a hospital, including practical instruction.
  - 3. In Obstetrics,<sup>1</sup> (a) of having attended during not less than one month the indoor practice of a lying-in hospital or the lying-in wards of a general hospital approved by the University, and (b) of having personally conducted not less than twenty cases of labour, subsequently to having acted as in-patient dresser and clinical clerk.
    - The certificate must in all cases (a) testify that such attendance has been given under the direct supervision of a medical officer of the hospital, and ( $\delta$ ) regarding the personal conduct of cases of labour, be signed by a member of the staff of a hospital or a maternity charity.
  - 4. In Gynæcology, of having, during at least three months, received in either a general or a special hospital, approved by the University, such clinical instruction in the diseases peculiar to women as shall be approved by the University.
  - 5. Of having received clinical instruction in diseases of the eye, ear, throat, and skin.
  - 6. Of having acquired proficiency in vaccination.

<sup>1</sup> This regulation is to come into force for students entering in and after October, 1906. Students who entered before that date are permitted to come under the regulation published in last year's Calendar.

7. Of having acted as a dresser for six months in the Surgical wards, as a Clinical clerk for six months in the Medical wards, and as a clerk for three months in the post-mortem room of a hospital recognised by the University.

## Detailed subjects of examination

### PHARMACOLOGY AND THERAPEUTICS.

#### PATHOLOGY AND BACTERIOLOGY.

- Candidates will be examined practically on Bacteriology, Pathological Anatomy, Histology, and Chemistry.
- FORENSIC MEDICINE AND TOXICOLOGY AND PUBLIC HEALTH.
  - Candidates will be required to conduct a qualitative analysis of poisonous substances selected from the following list :

    - CLASS I. (In simple solution) Carbolic Acid, Alcohol, Chloroform, Chloral Hydrate, Strychnine, Brucine, Morphine, Meconic Acid. CLASS II. (In combination with various organic substances) Mineral Acids, Oxalic Acid, Hydrocyanic Acid and the Cyanides, Caustic Alkalies, Phosphorus, Compounds of arsenic, antimony, mercury, lead, beginn in a concerned allow. lead, barium, zinc, copper, and silver.

They may also be required to determine the character of stains and stained fabrics, microscopically and chemically, and to recognise poisonous articles of the materia medica.

#### OBSTETRICS AND GYNÆCOLOGY.

Candidates will be required to show their practical acquaintance with obstetrical and gynæcological manipulations and instruments by the use of the phantom or otherwise, and will also be examined on museum preparations.

#### SURGERY: SYSTEMATIC, CLINICAL, AND PRACTICAL.

- Candidates will be examined on the use of surgical instruments and apparatus, and on museum preparations; they will also be required to perform operations on the dead body.
- Candidates, in order to pass, must satisfy the Examiners in the clinical part of the examination.
- MEDICINE: SYSTEMATIC AND CLINICAL, INCLUDING MENTAL DISEASES AND DISEASES OF CHILDREN.
  - Candidates, in order to pass, must satisfy the Examiners in the clinical part of the examination.

In determining the award of Honours account will be taken of the results of the Second examination.

Candidates who fail to satisfy the Examiners in any subject of the examination must, before being re-admitted to examination, produce evidence of having pursued such further study as may have been required by the examiners.

## Degrees in Medicine and Surgery

## Degree of Doctor of Medicine

Ordinance.

No candidate shall be admitted to the degree of Doctor of Medicine unless he has previously received the degrees of Bachelor of Medicine and Bachelor of Surgery, and at least one year has elapsed since he passed the examination for those degrees.

Candidates for the degree of Doctor of Medicine are required to present a dissertation, and, if the dissertation be accepted, to pass an examination. The dissertation, of which the subject must previously have received the approval of the Board of the Faculty of Medicine, must embody the results of personal observations or original research, either in some department of medicine or of some science directly related to medicine, provided always that original work, published in scientific journals or in the Proceedings of learned societies, or separately, shall be admissible in lieu of or in addition to a dissertation specially written for the Candidates will be required to write a short degree. extempore essay on some topic connected with medicine, and to answer questions on the history of medicine. They will also be examined orally on the dissertation or other work submitted. Any candidate may be exempted from a part or the whole of the examination if the Board of the Faculty so decide. No candidate will be admitted to the degree unless his application, after report from the Board of the Faculty of Medicine, shall have been accepted by the Senate.

The names of candidates who have been approved for the degree of Doctor of Medicine shall be published in alphabetical order.

Regulations.

Candidates for the degree of Doctor of Medicine are required to furnish three copies (printed or type-written) of the dissertation or published work which they desire to submit, together with any drawings or specimens which may be necessary for their illustration. These copies shall be sent in to the Registrar and will be retained by the University.

## Degree of Master of Surgery

Ordinance.

No candidate shall be admitted to the degree of Master of Surgery unless he has previously received the degrees

304

of Bachelor of Medicine and Bachelor of Surgery, and at least one year has elapsed since he passed the examination for those degrees.

Every candidate, before presenting himself for the examination for the degree of Master of Surgery, is required to have graduated as Bachelor of Medicine and Bachelor of Surgery, and to furnish certificates of attendance in accordance with the Regulations of the University.

### Subjects of Examination.

Surgical Anatomy Surgery Operative Surgery Clinical Surgery Ophthalmology Pathology and Bacteriology.

The names of candidates who have satisfied the Examiners shall be published in alphabetical order.

Candidates, before admission to the examination for Regulations the degree of Master of Surgery, are required to furnish certificates which shall be deemed satisfactory by the University that they, since taking the degree of Bachelor of Medicine and of Surgery, have held, for not less than six months, a Surgical appointment in a public hospital or other public institution affording full opportunity for the study of Practical Surgery.

Candidates proposing to present themselves for this examination are required to give notice, in writing, to the Registrar and pay the fee on or before June 1st.

Candidates for the degree of Master of Surgery are also required to furnish certificates :

- 1. Of having attended a special course of instruction on Operative Surgery, approved by the University, and of having personally practised the principal surgical operations on the dead body.
- Of having attended a systematic course of instruction, including practical work, approved by the University, on Bacteriology.
- 3. Of having attended a course on Ophthalmology, and of having received instruction in Ophthalmic Surgery approved by the University.

## DIPLOMA IN PUBLIC HEALTH

Regulations.

ons. The examination is held twice in each calendar year,<sup>1</sup> under the following regulations :

1. The examination is in two parts, and is written, oral, and practical.

2. Candidates, before entering for either part of the examination, must have held for not less than twelve months a registrable qualification in Medicine, Surgery, and Midwifery, and must present satisfactory certificates

- <sup>2</sup>i. Of having attended an approved course of instruction in Public Health in the University, or in a college or medical school recognised for this purpose by the University;
- <sup>2</sup>ii. Of having attended, after obtaining a registrable qualification, during at least six months practical instruction in laboratories approved by the University, the courses including Chemistry as applied to Public Health, Bacteriology, and the Pathology of those diseases of animals which are communicable from animals to man ;
  - iii. Of having, after obtaining a registrable qualification, attended during not less than three months the clinical practice of a hospital for infectious diseases approved by the several licensing bodies recognised under the Medical Act;
  - iv. Of having, after obtaining a registrable qualification, during six months (of which at least three months shall be distinct and separate from the period of laboratory instruction required under ii), been diligently engaged in acquiring a knowledge of the duties, routine and special, of Public Health administration under the supervision of the medical officer of health of a county, or of a single sanitary district having a population not less than 50,000, or a medical officer of health devoting his whole time to Public Health work, or a medical officer of

r During the present session this examination will begin on Monday, October 8, 1906, and Tuesday, March 12, 1907. Notice must be given and fees paid fourteen days before these dates.

<sup>2</sup> May be modified in the case of practitioners qualified before 1890.

health who is also a teacher in the Department of Public Health of a recognised medical school, or a sanitary staff officer of the Royal Army Medical Corps having charge of an Army district recognised by the General Medical Council, or command recognised for this purpose by the General Medical Council.

3. Candidates may present themselves for Parts I and II separately or at the same time, provided that no candidate be admitted to Part II unless he has already passed in Part I. No candidate's name will be published until he has satisfied the Examiners in both parts of the examination.

4. The fee for each part is  $\pounds_5 5s$ . For any subsequent examination in the same part the fee will be  $\pounds_3 3s$ .

Every candidate who has passed both parts of the examination, and who is legally registered, will receive a diploma in Public Health.

#### Subjects of Examination

Part I

1. CHEMISTRY AS APPLIED TO PUBLIC HEALTH :

Chemistry, with special reference to the examination of air and water. Methods of qualitative and quantitative analysis.

2. PHYSICS AS APPLIED TO PUBLIC HEALTH:

Elements of Heat, with special reference to warming, ventilation, and meteorology. Meteorological instruments and their use.

3. ENGINEERING AS APPLIED TO PUBLIC HEALTH :

Water supply. Drainage, sewerage, and disposal of refuse. Construction of dwellings, schools, hospitals, including their warming and ventilation. Geological data referring to the above. Interpretation of plans.

4. MICROSCOPY AS APPLIED TO PUBLIC HEALTH:

Foods, their adulterations, contaminations, and parasites. Air and water, their microscopical impurities.

5. PRACTICAL PATHOLOGY AND BACTERIOLOGY:

Practical Bacteriology, detection and cultivation of vegetable parasites, bacteriological analysis of air and water. Recognition of parasites and of the lesions which they produce in man. Recognition of diseased meat.

### Part II

I. ÆTIOLOGY OF DISEASE :

Pathology of epidemic and endemic diseases, including diseases of animals communicable to man. Influence of unwholesome food, air, water, occupation, dwelling, climate, season, soil.

2. SANITARY LAW AND ADMINISTRATION :

Domestic and general sanitation of houses, villages, and towns. Regulation of offensive, dangerous, or unhealthy trades and occupations. The prevention and control of epidemic disease by isolation, disinfection, vaccination, and other methods. Statutes and bye-laws relating to Public Health.

- 3. VITAL STATISTICS.
- 4. SANITARY REPORTING :

The candidate will be required to visit and report upon the sanitary condition of some locality assigned to him by the Examiners.

#### Order of Examination

#### Part I

The examination will include :

- I. A two hours' written examination on Chemistry as applied to, Public Health.
- 2. A four hours' practical and oral examination on Chemistry as applied to Public Health.
- 3. A three hours' written examination and an oral examination on Physics and Engineering as applied to Public Health.
- 4. A four hours' practical and oral examination on bacteriology, the pathology of infectious diseases, diseased meat, and the use of the microscope as applied to the examination of food, air, and water.

### Part II

The examination will include :

- 1. A three hours' written examination on the Ætiology of Disease.
- 2. A three hours' written examination on Sanitary Law and Administration, and on Vital Statistics.
- 3. Sanitary reporting.
- 4. Oral examination on the above subjects.

308

# DEGREES AND DIPLOMA IN DENTAL SURGERY

Ordinance.

The degrees in Dental Surgery shall be : Bachelor of Dental Surgery (B.Ch.D.) Master of Dental Surgery (M.Ch.D.)

## Degree of Bachelor of Dental Surgery

All candidates for the degree of Bachelor of Dental Surgery shall be required to have passed the Matriculation examination, to have pursued thereafter approved courses of study for not less than five academic years, two of such years at least having been passed in the University subsequently to the date of passing Parts I and II of the First examination, and to have completed such period of pupilage or hospital attendance, or both, as may be prescribed by the Regulations of the University. No candidate shall be admitted to the degree who has not attained the age of twenty-one years on the day of graduation.

All candidates shall be required to have passed the following examinations: The First examination, the Second examination, the Final examination.

Each examination shall include practical work in the subjects offered.

All candidates shall be required, before presenting themselves for examination, to furnish to the Registrar certificates testifying that they have attended the prescribed courses of instruction in accordance with the Regulations of the University in each of the subjects which they offer, and that they have fulfilled the other requirements of the Ordinance and Regulations in respect of such examination.

In each examination the names of candidates who have Regulations. satisfied the Examiners shall be published in alphabetical order.

### First Examination

The First examination shall consist of three parts :

Ordinance.

PART I. Physics

Chemistry.

PART II. Biology. PART III. Dental Mechanics Dental Metallurgy.

Candidates shall be allowed to pass in each part separately.

Candidates who have passed the Intermediate examination for the degree of Bachelor of Science, and have in that examination satisfied the Examiners in Chemistry, in Physics, or in Biology, shall, on payment of the difference between the fees required for the two examinations, be regarded as having satisfied the requirements of Parts I and II of the First examination for the degree of Bachelor of Dental Surgery, in those subjects in which they have passed.

Candidates shall be required, before presenting themselves for Parts I and II of this examination, to have passed the Matriculation examination, and to have attended courses of instruction in accordance with the Regulations of the University.

Candidates shall be required, before presenting themselves for Part III of this examination, to have completed two years from Matriculation, and to have attended courses of instruction in accordance with the Regulations of the University.

Regulations. Candidates for Part I or Part II of the First examination shall be required to have attended during at least one year, either in the University or in an institution recognised for this purpose by the University, courses of instruction, including laboratory work, in the subjects of the examination, namely:

> Part I. Physics: lectures and laboratory work. Chemistry, Inorganic and Organic: lectures and laboratory work.

> Part II. Biology (Zoology and Botany): lectures and laboratory work.

Every candidate for Part III of the First examination shall be required to have spent two years in the Prosthetic Department of a recognised Dental or General Hospital, or in pupilage to a qualified and registered dental surgeon, and to have attended, during at least one year, courses of lectures and practical instruction approved by the University, in the subjects of the examination, namely: Dental Mechanics (including electrical appliances used in Dentistry): lectures and laboratory work. Dental Metallurgy: lectures and laboratory work

The First examination shall be held twice in each calendar year.

### Second Examination

The subjects of the Second examination shall be :

Anatomy

Physiology

Dental Anatomy and Physiology

Dental Materia Medica.

Candidates shall be required, before presenting themselves for the Second examination, to have passed the First examination not less than one year previously, and to have attended courses of instruction in accordance with the Regulations of the University.

Candidates for the Second examination shall be required Regulations. to have attended courses of instruction approved by the University, as follows: Anatomy lectures, two terms; Practical Anatomy and demonstrations, including the dissection of the head and neck, three terms; Dental Anatomy and Physiology, one term; Dental Microscopy, one term; Physiology lectures, two terms; Physiological Laboratory, one term; Practical Histology, one term; Dental Materia Medica, one term.

The Second examination shall be held twice in each calendar year.

### Final Examination.

The subjects of the Final examination shall be :

Ordinance.

Dental Surgery

Dental Pathology and Bacteriology

Operative Dental Surgery

Medicine and Surgery.

Candidates shall be required, before presenting themselves for the Final examination, to have passed the First examination not less than two years previously, to have passed the Second examination not less than six months previously, and to have attended courses of instruction in accordance with the Regulations of the University.

Ordinance

Regulations.

312

Candidates for the Final examination shall be required to have attended courses of study, approved by the University, as follows : Surgery lectures, two terms ; Special Surgery of the Mouth, six lectures ; Medicine lectures, two terms ; Dental Surgery and Pathology lectures, two terms ; Operative Dental Surgery lectures, one term ; Demonstrations on Anæsthetics, two terms.

Candidates shall be required to present certificates of two years Medical, Surgical and Dental practice at hospitals recognised by the University. These certificates must show that practical instruction has been received in Medicine, Surgery, and the administration of Anæsthetics. Every candidate shall be required to have acted as clerk and as dresser, for three months in each case, in a hospital recognised by the University.

The Final examination shall be held twice in each calendar year.

## Diploma in Dental Surgery (L.D.S.)

Regulations.

Candidates for the diploma in Dental Surgery (L.D.S.) are required to present certificates showing that they have attained the age of twenty-one years, that they have attended courses of instruction, approved by the University, extending over not less than four years, and that they have completed a pupilage of three years, two of such years at least having been taken before the First Professional examination.

Candidates are required to satisfy the Examiners in the several subjects of the following examinations :

A Preliminary examination in Arts; a Preliminary examination in Science; the First Professional examination; and the Final examination.

### Preliminary Examination in Arts

The requirements of the Preliminary examination in Arts shall be fulfilled by passing an examination recognised for this purpose by the General Medical Council.

### Preliminary Examination in Science

The Preliminary examination in Science shall be held twice yearly, namely, in April and in September or October. Its subjects shall be:

> Chemistry Physics.

Candidates are required to give evidence of having attended courses of instruction recognised by the University as follows: Chemistry, lectures and laboratory, two terms; Physics, lectures and laboratory, two terms. This instruction may be taken at any school or technical college recognised by the University.

### First Professional Examination

The subjects of the First Professional examination are : Dental Metallurgy

Dental Mechanics.

Candidates are required to have passed the Preliminary examination in Science not less than six months previously, and to have attended courses of instruction, recognised by the University, in the subjects of the examination, according to the syllabus of the Conjoint Board. They are also required to give evidence of having spent two years in pupilage.

### **Final Examination**

The Final examination shall consist of two parts :

PART I. Anatomy

Physiology Dental Anatomy and Physiology Dental Materia Medica.

PART II. Surgery

Dental Surgery, Pathology and Bacteriology Operative Dental Surgery (Practical).

Candidates must pass in Part I before being examined in Part II, and may pass the two parts separately. The examination in Part II shall be held immediately after that in Part I, so that the two parts may be passed, if desired, in immediate succession.

Candidates, before presenting themselves for examination in Part I, are required to have passed the First Professional examination not less than one year previously, and to have attended courses of instruction recognised by the University, as follows : Anatomy lectures, two terms ; Practical Anatomy, three terms ; Physiology lectures, two terms ; Practical Physiology, one term; Dental Anatomy and Physiology lectures, one term; Practical Dental Histology, one term; Surgery lectures, two terms; Special Surgery of the Mouth, six lectures.

Candidates before presenting themselves for examination in Part II, must have passed in Part I, and must produce evidence of having (1) completed four years from the beginning of their pupilage; (2) spent three years in pupilage; (3) completed two years' Medical and Surgical practice at hospitals recognised by the University: (4) completed two years' Dental Hospital practice; (5) attended courses of instruction recognised by the University, as follows: Medicine, one term; Dental Surgery and Pathology lectures, one term; Dental Bacteriology lectures, one term; Operative Dental Surgery lectures, one term; Six Special Anæsthetic demonstrations; Dental Materia Medica, one term. The certificates of Medical and Surgical practice must show that practical instruction has been received in Medicine and Surgery, and in the administration of Anæsthetics.

314

## Courses in Medicine

## I. COURSES HELD IN THE UNIVERSITY BUILDINGS, COLLEGE ROAD

### PHYSICS

Professor Stroud Mr. Allen Mr. Shorter Mr. Carlton

The course designed to meet the wants of candidates for the First M.B. examination of the University of Leeds or the Preliminary Scientific (M.B.) examination of the University of London, will consist of two experimental lectures on Wednesdays and Fridays, at 4 p.m., and one calculation class, on Thursdays, at 9.30 a.m., weekly throughout the session.

Fee,  $\pm$ , 3 135. 6d.

The Physical laboratory is open daily. A special course of Practical Physics for medical students will be held on Saturday mornings, from 9.30 a.m. to 12.30 p.m., throughout the session. Fee,  $\pounds_3$  3s.

For further information see page 229.

### CHEMISTRY

Professor SMITHELLS	Professor Cohen
Dr. DAWSON	Mr. Lowson
Mr. WHITELEY	Mr. PERKINS

#### I. General Course

Part I. Inorganic Chemistry: during the first and second terms. Mondays, Wednesdays, and Fridays, at 11.30 a.m. Tutorial class on Wednesdays, at 2 p.m.

Part II. Organic Chemistry: during the third term. Mondays, Wednesdays, and Fridays, at 11.30 a.m. Tutorial class on Wednesdays at 2 p.m. and Thursdays at 10.30 a.m.

Fee for the whole course (including tutorial class)  $\pounds_4$  4s.; for part I,  $\pounds_3$  13s. 6d.; for part II,  $\pounds_1$  1s.

(See page 232.)

### **II. Practical Chemistry**

Fridays, 2 to 4 p.m., throughout the session. Tuesdays and Thursdays, 2 to 5 p.m., in the first and second terms, and Tuesdays, 9.30 a.m. to 12.30 p.m., in the third term. (See page 234.)

### Courses in Medicine

### III. Organic Chemistry

Tuesdays, Thursdays, and Saturdays, at 12 noon, throughout the session. Fee,  $\pounds_3$  13s. 6d.

(See page 233.)

### **IV. Practical Organic Chemistry**

Tuesdays and Thursdays, from 1c a.m. to 12 noon during the third term. Fee,  $\pounds 2$  2s.

N.B. Courses III and IV are suitable for students preparing for the Intermediate M.B. examination of the University of London.

### V. Sanitary Chemistry

For practitioners who are preparing for a diploma or degree in Public Health.

Tuesdays and Thursdays, from 2 to 5 p.m., during the third term. (See page 235.)

Fee, £,5 5s.

N.B. For students who wish to take additional practical work of whatever kind, the Chemical laboratories are open daily from October to June inclusive.

## BIOLOGY

Professor MIALL Mr. TAYLOR

Mr. WALKER

Dr. Smith

## Mr. UNWIN

For full details of the various courses see under the Department of Biology, page 238.

1. For students preparing for medical diplomas : Course II, Medical Biology, page 240.

Each student will be required to provide himself with a microscope (suitable also for his subsequent studies, see pages 319, 320), a dissecting case, a biological drawing book, and some simple instruments for microscopic work. The Professor will be glad to advise students on these points.

2. Students preparing for the First M.B. examination of the University of Leeds, or the Preliminary Scientific (M.B.) of London, should take the courses in Zoology and Botany, which form part of a special course qualifying for these examinations. See Course I, Elementary Biology, page 238.

#### Biology—Anatomy

3. Students preparing for the Fellowship examination of the College of Surgeons of England may take a three months' course of Zoology in the first term, including not less than four hours' practical work per week.

Fee, £ 3 3s.

4. Where Botany is required for any of the medical examinations, the ordinary course (Course I, B., page 239) should be taken. Fee,  $\pounds 5$  5s.

# II. COURSES HELD IN THE SCHOOL OF MEDICINE

## ANATOMY

# Professor Griffith Mr. Jamieson Mr. Teale Mr. Dobson

## Mr. Gough

### I. Descriptive Anatomy

Mondays, Wednesdays, Thursdays, and Saturdays at 9.15 a.m., during the first and second terms.

The systematic course of lectures is, for convenience of teaching, divided into two parts. Students are required to attend both parts before they are entitled to signature for one full course of Anatomy.

The first part is intended for first year's students, and treats especially of osteology and the anatomy of the joints and limbs.

The second part deals with the anatomy of the head and neck, thorax and abdomen; and particular attention is paid to the nervous system and the organs of special sense.

Fee for each part,  $\pounds 5$  5s.

Systematic tutorial classes are held in connection with the October course.

### **II.** Practical Anatomy

The dissecting room is open daily from 9 a.m. till 5 p.m., (Saturdays until 12.30 p.m.) throughout the session, the work of the students being constantly supervised by the Demonstrators, who attend daily. Tutorial classes and examinations are held daily on recent dissections and on preparations from the anatomical museum; and special instruction is given to all students who are about to present themselves for examination, particularly to those preparing for the higher examinations, such as University degrees and the Primary F.R.C.S., Eng.

Only those students are admitted into the Dissecting-room who have entered for the Anatomy course, or who have paid the fee for the use of the room.

Fees	£	s.	d.
Use of Dissecting-room, with tutorial instruction,			
during attendance on the anatomical course, covering two sessions	5	5	о
Use of Dissecting-room, with tutorial instruction,	5	Ĵ	
for every three months or portion of three months during the two years subsequent to the			
above period	2	2	0
Use of Dissecting-room, with tutorial instruction under all other circumstances, for three			
months, $\pounds 3$ 3s.; for six months	5	5	0

### III. Applied Anatomy

The class meets on Wednesdays and Saturdays at 9 a.m., during the third term, in the Anatomy Theatre. It is intended for senior students and for qualified practitioners. It deals with the application of anatomical facts to medicine and surgery, and is fully illustrated by dissections, diagrams, and the living model.

Fee, £ 2 25.

# PHYSIOLOGY AND HISTOLOGY

Professor BIRCH Mr. CLARK

### I. General Course

This course of lectures deals with Physiology generally, and is illustrated by experiments. Mondays, Wednesdays, Thursdays, Fridays, at 2 p.m., during the first and second terms.

Fee, £8 8s.

## II. Advanced Course

About 18 lectures, on Tuesdays in the first and second terms, to be attended by students in the session succeeding that in which they have attended Course I.

Fee, £, 2 2s.

NOTE: The complete "Course" consists of Courses I and II.

### **III. Microscopical Demonstrations**

are held at 11 a.m. every Saturday throughout the session, and are open to all students attending courses of Physiology.

### IV. Practical Physiology

This course is divided into two parts. Students are required to attend both parts before they are entitled to signature for a course of Practical Physiology.

Part I. Practical Histology: During the third term, on Mondays, Wednesdays, and Fridays, for about two hours in the morning.

Students are required to provide themselves with the following: (1) A microscope of good construction, provided with 1 inch and  $\frac{1}{6}$  inch objectives and a condenser, which should be submitted for approval to the Professor on the first day of the session. The Professor will be glad to assist students in the choice of an instrument. (2) Some accessories, a list of which can be had on application.

Part II extends through the first and second terms.

This covers the work in chemical and experimental Physiology required by the University.

Fees: for part I,  $\pounds$ , 6 6s.; for part II,  $\pounds$ , 4 4s.

### V. Physiological Demonstrations and Catechetical Classes

are held during the session at such times as may be found convenient.

### VI. Recapitulatory Class

A short laboratory course for students who desire to recapitulate their laboratory work. Classes will be formed in the second and third terms, and will meet twice a week, at times to be arranged.

Fee, £, 2 2s.

### The Physiological Laboratories

are open daily during University hours for practical work; the fees are on the same scale as in the other laboratories of the University. (See page 118.)

## PATHOLOGY AND BACTERIOLOGY

Professor GRÜNBAUM

Mr. Scott Mr. Smedley Mr. Collinson

### I. General Pathology

Mondays, at 4 p.m., and Tuesdays and Thursdays, at 12 noon, in the third term.

Fee, £4 4s.

## II. Practical Pathology and Bacteriology

Tuesdays, Wednesdays, and Fridays, from 12 noon to 1.30 p.m. during the first and second terms. In this class practical instruction with intercalated lectures is given in Morbid Histology, Bacteriology and Pathological Chemistry. Students will make and mount preparations for microscopical examination and will make bacteriological investigations required for diagnosis.

Each student must provide himself with a good microscope, having an oil immersion lens and a condenser, and with the usual accessories.

Fee, £5 55.

III. Tutorial Classes in Surgical and in General Pathology will be held by Mr. Collinson and by Mr. Scott, as may be arranged from time to time.

## IV. Clinical Pathology

A postgraduate practical class in this subject will be held during the first term, on Wednesdays at 4 p.m.

Fee, £3 3s.

### V. Bacteriology for the Diploma in Public Health

This course will be held in the second term. It will include practical instruction in the pathology of those diseases of animals which are communicable to man. (See page 327.)

Fee, £5 5s.

### The Laboratories of Pathology and Bacteriology

are open daily for research work. The fees are on the same scale as in other laboratories of the University. (See page 118.)

In this department the various bacteriological and pathological investigations required by county and municipal authorities and by private practitioners are carried out. Medicine and Surgery

# PRINCIPLES AND PRACTICE OF MEDICINE

Professor Barrs Dr. Watson

Mondays, Wednesdays, and Fridays, at 9 a.m., during the first and second terms.

The complete course extends over two years. It is divided into the following sections :

Diseases of the nervous system.

Diseases of the organs of circulation.

Diseases of the organs of respiration.

Diseases of the digestive and blood-forming organs.

Diseases of the kidneys.

Infectious and contagious diseases, fevers, diphtheria, syphilis, hydrophobia, &c.

Parasites.

L

Diseases of the skin.

Diseases of special trades.

Fee,  $f_{,6}$  6s.

### SYSTEMATIC SURGERY

Professor LITTLEWOOD

Mr. Dobson

Tuesdays, Thursdays, and Saturdays, at 9 a.m., during the first and second terms.

The course comprises the following subjects :

The process of repair.

Inflammation; suppuration; ulceration.

The constitutional effects of injury ; shock, fever, delirium, &c.

Injuries and wounds, including special injuries of head, spine, throat, chest, and abdomen.

Special fractures and dislocations.

Surgical diseases; gangrene; erysipelas; septicæmia; pyæmia; tetanus.

Tumours; tubercle; venereal diseases.

Surgical diseases of special parts :---skin, lymphatic system, vascular system, nervous system, bones, joints, &c.

Deformities. Plastic and orthopædic surgery.

Abdominal surgery, including hernia.

Diseases of the urinary and generative organs. Fee,  $\pounds, 6$  6s.

321

# PRACTICAL SURGERY

## Mr. KNAGGS

Tuesdays and Thursdays at 4 p.m., during the first and second terms.

In this are comprised :

I. A course of bandaging and application of splints and other appliances.

2. Demonstrations and descriptions of instruments and surgical appliances used in diagnosis or treatment.

3. The application of anatomical knowledge to the investigation of surgical diseases.

4. Methods of reducing dislocations, setting fractures and dressing wounds.

5. A course of operations performed on the dead body before the class, the members of which will be required to operate.

Fee, £4 4s.

## OPERATIVE SURGERY

## Mr. THOMPSON

During the third term classes will be formed for the performance of operations on the dead body, under the superintendence of the lecturer. As all the important operations will be done by the students, every opportunity will be given for gaining practical experience in this branch of surgery. Fee,  $\pounds_{12}$  12s. divided in equal shares among a class of not more than four students.

## **OBSTETRICS**

## Professor WRIGHT

## Dr. Croft

Mondays, Wednesdays, Fridays, and Saturdays, at 12 noon, during the third term. Demonstrations on Thursdays at 9 a.m. Subjects :

Pelvis and female organs of generation.

Fœtus and membranes.

Signs, disorders, and complications of Pregnancy. Abortion.

### Obstetrics---Gynæcology

Labour—(1) Natural, its mechanism and management; the puerperal state. (2) Abnormal—Lingering, precipitate and obstructed labour. (3) Preternatural. (4) Instrumental—Forceps, version, craniotomy, and its alternatives. (5) Complications and accidents of labour.

Diseases of the puerperal state.

The various presentations will be demonstrated on the Phantom, and practical instruction given in the use of obstetrical instruments.

A series of demonstrations is given by Dr. Croft during the third term, attendance upon which is required from all students taking the course of Obstetrics. Tutorial classes are also held from time to time for students preparing for their final examinations.

The necessary facilities are given by the Maternity department of the Infirmary for students to attend cases of labour.

By the rules of the Infirmary, the Maternity clerkship must not be taken until after the attendance upon this course of lectures and demonstrations has been completed.

Fee,  $\pounds_5$  5s.; together with Gynæcology,  $\pounds_6$  6s.

## **GYNÆCOLOGY**

### Dr. Hellier

Mondays and Wednesdays at 4 p.m. during the first term. Subjects :

Methods of physical diagnosis in diseases peculiar to women; observations on the surgical anatomy of the female pelvis; functional and organic affections of the female pelvic organs; relation of these to diseases of the body generally.

Dr. Hellier will also give instruction in the diseases of new-born children, and in the management of infancy, including infant feeding.

Fee,  $\pounds_3$  3s.; together with Obstetrics,  $\pounds_6$  6s.

# THERAPEUTICS, PHARMACY, AND MATERIA MEDICA

Professor TREVELYAN Mr. GOUGH

### I. Pharmacology and Therapeutics

Mondays, Wednesdays, and alternate Fridays, at 4 p.m. during the second term.

The subjects treated of will be the general principles of the treatment of disease, the physiological and therapeutic action of drugs, and the mode of their administration. On the alternate Fridays, remedial measures (other than drugs), including heat, cold, massage, electricity, climatic, and dietetic treament will be dealt with.

Fee, £3 35.

## II. Materia Medica and Pharmacy

Mondays and Wednesdays, 2.45 to 5 p.m., during the third term. Subjects :

*Materia Medica*: Sources, preparation, physical characters, pharmacopœial combinations, tests, doses, and general uses of the principal drugs.

*Practical Pharmacy*: General pharmaceutical processes; prescriptions; weights and measures; the compounding of a large series of typical prescriptions, including mixtures, pills, powders, emulsions, tinctures, lotions, inhalations, plasters, ointments, &c. The best methods of dispensing the principal drugs. Incompatibility.

The first hour is given to demonstrations and tutorial teaching in Materia Medica, the remaining time being devoted to Practical Pharmacy.

Fees: Materia Medica,  $\pounds_4$  4s.; Practical Pharmacy,  $\pounds_3$  3s.

## PUBLIC HEALTH

## Professor CAMERON

Wednesdays and Saturdays, at 9 a.m., during the third term. Subjects :

Comparison of rates of mortality in town and country. Epidemic and endemic diseases and their prevention. Isolation hospitals. Disinfection and disinfectants. Influence of occupation on health. Factory and workshop legislation, Meaning to be attached to death rates. How they are affected by constitution of the population in regard to age and sex.

Registration of births. Certificates of causes of death, for burial, for cremation.

Notification of infectious diseases.

The dwelling: site, subsoil, aspect, structure, lighting, ventilation, drainage, overcrowding.

Public and private water supplies, their dangers.

Disposal of refuse, including sewage.

Visits to works, &c.

Fee, £3 35.

N.B. For candidates for degrees or diplomas in Public Health, this course will be supplemented by additional lectures.

# FORENSIC MEDICINE & TOXICOLOGY

### Professor CAMPBELL

Dr. EURICH

### I. Forensic Medicine

Tuesdays, Wednesdays, Thursdays, and Fridays at 4 p.m. during the third term. Subjects :

The qualifications, duties, and responsibilities of medical witnesses.

Questions concerning age, sex, identity, insanity and life insurance.

Death :---Real and apparent death ; date of death ; causes of sudden and violent death ; post-mortem examinations.

Death by wounds; by lightning, burns, cold and starvation; by drowning, hanging, strangling and suffocation.

Rape; pregnancy; delivery; the legitimacy of children; abortion; infanticide.

Toxicology:—general considerations respecting poisoning; toxicological processes and the evidence of poisoning; symptoms of special poisons; treatment and analysis.

Fee, £5 5s.

### Courses in Medicine

### II. Practical Toxicology

The class meets on Thursdays and Fridays from 3 to 5 p.m., in the third term, from early in June to the middle of July. Students receive practical instruction in the methods of detecting the commoner poisons, including prussic acid and the cyanides, carbolic acid, oxalic acid, and the oxalates, arsenic and metallic poisons, mineral acids, caustic alkalies, alcohol, chloral and chloroform, alkaloids, &c.

Fee,  $\pounds_2$  5s., including the use of apparatus.

## OPHTHALMOLOGY AND OTOLOGY

### Mr. SECKER WALKER

Tuesdays and Fridays at 9 a.m., during the third term. Subjects:

*Ophthalmology*: Surgical anatomy of the eye, theory of the ophthalmoscope, retinoscopy; emmetropia, hypermetropia, myopia, astigmatism; theory of accommodation; diseases of the conjunctiva and cornea, of the iris, ciliary body and choroid; cataract; glaucoma; diseases of the retina and optic nerve; functional diseases of the eye; affections of the ocular muscles and lacrymal apparatus; diseases of the orbit and eyelids.

*Otology*: Diseases of the external ear; diseases of the middle ear, their connection with naso-pharyngeal disorders; disease in the mastoid process, its extension to the cranial cavity; diseases of the internal ear.

Fee, £3 3s.

## MENTAL DISEASES

### Mr. BEVAN-LEWIS

Systematic lectures are given at the School of Medicine on Tuesdays at 4 p.m., and clinical lectures and demonstrations at the West Riding Asylum, on Fridays, at 3.30 p.m., during the third term.

In the systematic lectures, the pathology, symptoms, medico-legal relations and treatment of insanity will be discussed.

The clinical course will embrace: Illustrations of the various forms of mental disease; instruction in the method of examining insane persons; practical demonstrations on the moral and therapeutic treatment of the insane; compulsory feeding, &c.; filling up certificates of insanity; class examinations.

The pathological aspects of insanity will be freely illustrated by morbid specimens and microscopic preparations from the museum of the Asylum.

Fee, £3 3s.

## III. COURSES OF INSTRUCTION FOR CANDIDATES PREPARING FOR PUBLIC HEALTH DIPLOMAS

For the regulations of the University for the diploma in Public Health see page 306.

The following courses of instruction are arranged to prepare for the University diploma, and for those of other examining bodies:

I. Public Health. (See page 324).

**2. Sanitary Chemistry.** In the Chemical laboratory, College Road. (See page 235).

**3. Bacteriology.** At the School of Medicine during the second term. The course will include practical instruction in the pathology of those diseases of animals which are communicable from animals to man. Subjects: General sketch of bacteria; preparation of nutrient media; sterilisation; methods of cultivation; inoculation; microscopical examination and methods of staining; examination of the chief pathogenic bacteria—anthrax, tubercle, typhoid, cholera, diphtheria, &c; methods of bacteriological examination of air, water, food.

Each student must be provided with a microscope approved by the Professor. The microscope must have an immersion lens and a condenser.

Fee, £5 5s.

4. Attendance at a Hospital for Infectious Diseases. A special course, including instruction in administration, is given in the Leeds City Hospitals. Times of attendance to be arranged.

Fee, £5 5s.

5. Practical Work in Sanitation. With the sanction of the Sanitary Authorities of Leeds, the Medical Officer of Health arranges courses of six months' instruction in out-door and office sanitary work. Fee for the course, payable in advance to Dr. Spottiswoode Cameron, at his office, 41, Park Square, between 10 and 11 a.m.,  $f_{10}$  10s.

The University entrance fee of  $\pounds_{II}$  is charged to those who have not previously been students of the University, unless a sessional fee of 7s. is paid for each class attended.

## HOSPITAL PRACTICE

1. For degrees at the University of Leeds and certain other Universities, three years' hospital practice is necessary. One of these should be taken before the second M.B. examination has been passed. Students intending to take such degrees should enter their names upon the Infirmary Register at the beginning of the third year of their studies in medicine. Failure to do this will prevent them from completing the necessary attendance by the time when they would normally present themselves for the Final examination.

2. In order to be entered upon the Infirmary register a student must first pay his fees to the Treasurer of the Faculty (Dr. Barrs), at 25A, Park Square, and then interview the Secretary of the Faculty (Mr. W. Thompson), at 4, Park Square, to obtain advice in arranging his work at the Infirmary.

3. An introductory class is held twice a year, viz., in April and October. It consists of 15 demonstrations or lectures on elementary subjects, and is conducted by the resident medical, surgical, and ophthalmic officers. Students are required to attend this class as soon as possible after passing the Second M.B. or a corresponding examination, and before holding any Infirmary appointment.

4. The attention of students is directed to the necessity for carefully arranging, beforehand, the time at which they propose attending at the Fever hospital, as during the period of such attendance they are excluded from the surgical, ophthalmic and gynæcological wards and cannot act as maternity clerks. Full information as to clinical instruction and appointments offered to students is contained in the prospectus of the School of Medicine.

Leeds General Infirmary. The medical and surgical practice required by medical students is taken at this institution, which offers abundant opportunities for clinical study. Situated in the centre of a densely populated manufacturing and mining district, and drawing patients also from a wide surrounding area, its wards present an ample field for the study of diseases and injuries. The concentration of medical, surgical, gynæcological, ophthalmic, aural and children's diseases in one hospital leads to much economy in time and labour to the student.

The nature of the work done in the Leeds Infirmary makes the clerkships and dresserships of great value, and the resident appointments involve so much practical work and personal responsibility as to give the holders a very varied and valuable experience.

**Leeds Public Dispensary.** About 30,000 medical and surgical cases are treated annually, partly as outpatients, and partly at their own homes. There are three resident medical officers, to each of whom a separate district of the city is assigned.

The practice of the Dispensary is open to any student on application to one of the honorary staff.

## Leeds City Fever and Small Pox Hospitals

Students are admitted at the Leeds City Hospitals (Medical Superintendent, Mr. A. E. Pearson) on having obtained sanction from the Dean of the Faculty of Medicine, subject to such regulations as may be made from time to time by the Leeds City Council.

Students must abide by the rules laid down as to disinfection and other matters, and must satisfy the Corporation authorities that they are sufficiently protected against small pox by vaccination.

At the Small Pox hospital a minimum period of one week's residence may be required with payment in advance of 12s. a week for board and lodging. The courses of instruction are from November to January (two meetings a week), February and March (three meetings a week), and May to July (two meetings a week). The hospitals are not open to students during April, August, or September. Application for admission must be made to the Dean before the commencement of the course. Clinical lectures on infectious diseases will be given by the Medical Superintendent of the hospitals, and the attendance of students at these lectures and on the practice must be completed during the term for which they enter.

Those desirous of attending the practice outside the ordinary classes or clinical instruction, and not requiring a certificate of their attendance, must apply for permission to the Medical Officer of Health of the City of Leeds, Dr. J. S. Cameron, at his office in 41, Park Square, between the hours of 10 and 11 a.m.

Fee for the three months' course,  $\pounds_2$  2s.

Hospital for Women and Children. A limited number of senior students can here receive instruction in the practical treatment of diseases of women. The hospital is recognised for this purpose by the University of Leeds. Application is to be made to one of the Honorary Staff. A new building for 55 beds is now occupied, including a maternity department for lying-in cases.

Leeds Maternity Home. The practice of the newlyfounded Maternity Home in Tonbridge Street will be available for the instruction of a limited number of students, subject to regulations laid down by the Hon. Medical Officers, to one of whom application should be made.

West Riding Lunatic Asylum, Wakefield. This institution, which accommodates 1,860 patients, offers unusual advantages to those who desire to make themselves conversant with the treatment and management of the insane. Further accommodation in connection with the Asylum for 280 patients has been provided by the erection of a hospital for the treatment of acute insanity, and a separate home for 70 imbecile and idiot children has been lately opened. Clinical lectures and demonstrations are given at the Asylum in connection with the systematic lectures on insanity delivered at the School of Medicine, by Mr. W. Bevan-Lewis, Medical Director of the Asylum, **Instruction in Vaccination** is given under the Local Government Board at the General Infirmary on Thursdays at 3 p.m., by Mr. A. T. Bacon, Instructor in Vaccination. Classes begin in October, February, and May. Each class consists of seven meetings, six of which must be attended, four of them consecutively.

Fee,  $\pounds_{1115}$ . 6d. Application to be made to the Dean.

## Courses in Dental Surgery

Arrangements are now being made for courses of study preparatory for the degrees and the diploma in Dentistry. Particulars will be given in the prospectus of the School of Dentistry, to be obtained from the Registrar on application at the beginning of the session.

## EVENING CLASSES

The University has instituted Evening Classes in the following subjects :

- 1. Civil and Mechanical Engineering, Electrical Engineering, Coal Mining, Textile Industries, Dyeing and Tinctorial Chemistry, and Leather Industries. By a recent arrangement with the Education Committee of the Leeds City Council, the instruction in these subjects is co-ordinated with the City's scheme of evening classes in Technology.
- 2. English Literature and Economics.

## I. Classes in Technological Subjects

The dates of the evening class session in these subjects will be October 3 to December 19, 1906; January 7 to March 27, 1907; and April 3 to April 26, 1907.

The fee for the whole, or any portion, of a group course is ros. 6d., payable to the Registrar in advance.

All candidates for admission to these classes are required to furnish evidence of adequate preparation for the course of study which they propose to take. Unless they hold certificates of satisfactory attendance at the Leeds City evening schools or other recognised institutions they will be required to pass an entrance test, but the Head of the Department will exempt at his discretion such candidates as have satisfied him that they possess sufficient preliminary knowledge. An examination for this purpose will be held at the University on the evening of Monday, October 1, 1906. All students desiring to enter for any of these classes must apply to the Registrar not later than Thursday, September 27, stating their intention of presenting themselves for the examination or applying for exemption therefrom.

Students entering late in the session will be required to satisfy such test as the Head of the Department may see fit to impose.

#### CIVIL AND MECHANICAL ENGINEERING<sup>1</sup>

Professor Goodman Mr. Gilchrist Mr. MacLachlan Mr. Duncan Mr. Thomson

Attendance for four sessions at the Leeds City evening classes in Mathematics, Mechanics, and Machine Drawing, is accepted as a qualification for admission to the evening classes in this Department. The entrance examination for students who are not able to present certificates of satisfactory attendance upon the above or other preparatory classes will consist of papers in Elementary Mathematics (including Algebra up to quadratic equations, Logarithms, Trigonometry up to the solution of triangles, and Geometry equivalent to Euclid, books i and ii) and in the special subject of study.

The evening courses are arranged to cover the work required for the examination for Associate membership of the Institution of Civil Engineers.

#### The Theory of Heat Engines

A course of lectures by Mr. MacLachlan on Tuesdays, from 7.30 to 8.30 p.m., followed by a class from 8.30 to 9.30 p.m., for working out examples.

#### Engineering Laboratory

The following courses of instruction will be given by Messrs. MacLachlan, Duncan and Thomson, in the Engineering laboratory on Wednesdays, from 7.30 to 9.30 p.m.

#### Course A. Testing of Materials

The testing of iron, steel, alloys, &c., in tension, torsion, compression, bending, and punching. This work is done on:

- 1. A 100-ton Buckton testing machine, fitted with an autographic recorder.
- 2. An Olsen machine of 50,000 lbs. capacity.
- 3. A Denison machine of 5,000 lbs. capacity.
- 4. Special appliances for torsion testing.

<sup>&</sup>lt;sup>1</sup> For further details see the special prospectus of the Engineering Departments or the Evening Class prospectus.

#### Course B. Steam, Gas, and Oil Engines

Testing pulsometer, indicating and testing steam, gas, and oil engines, testing a De Laval steam turbine. Steam boiler and engine trials. The indicating and testing work is done on a 70 h.p. compound Willans engine; a 30 h.p. Fowler compound engine; a small fan engine; a Premier gas engine of 15 h.p.; a Campbell 13 h.p. oil engine; and a small petrol engine.

## Course C. Hydraulics

Experiments on the flow of water over weirs and through orifices, the friction of water in pipes, the pressure of jets on surfaces, the bursting strength of pipes, &c., by a Berry's high pressure test pump.

Tests of a Pelton wheel; a Gilkes' turbine, fitted with a Kent Venturi water meter; a  $6'' \times 4''$  Green reciprocating pump; a Hett centrifugal pump.

## Machine Drawing and Design

A course of instruction by Mr. Thomson on Thursdays from 7.30 to 9.30 p.m.

#### Steam Turbines

A course of lectures by Professor Goodman on Thursdays from 8 to 9 p.m.

#### The Design of Elementary Structures employed in Civil Engineering, and the use of Graphic Methods

A course of lectures by Mr. Gilchrist on Fridays from 7.30 to 8.30 p.m.

#### The Strength and Elasticity of Materials

A course of lectures by Mr. Thomson on Fridays from 8.30 to 9.30 p.m.

#### ELECTRICAL ENGINEERING<sup>1</sup>

#### Mr. PARR Mr. FRENCH

The entrance requirements are similar to those in the department of Civil and Mechanical Engineering. (See page 333).

<sup>1</sup> For further details see the special prospectus of the Engineering Departments or the Evening Class prospectus.

Two separate evening courses of instruction (A & B) are given in Electrical Engineering, each consisting of a course of lectures together with a corresponding course of practical work in the laboratories. Course B forms a continuation of Course A. The laboratory work in each course is specially designed with the view of assisting students in understanding the lectures. Lectures and laboratory work may be taken separately, but students are advised to take both together. The two complete courses A & B practically cover the ground for the Preliminary, Ordinary, and Honours grades of the Electro-technological Examinations of the City and Guilds of London Institute.

#### Course A

Lectures on Thursdays from 7 to 8 p.m., beginning October 4. Laboratory work on Mondays from 7 to 9 p.m., beginning October 8.

#### Course B

Lectures on Thursdays from 8.5 to 9.5 p.m., beginning October 4. Laboratory work on Tuesdays from 7 to 9.30 p.m., beginning October 9.

#### Jointing Course

This course may be taken either as a separate course or in lieu of part of the above experimental courses. On Tuesdays from 7 to 9 p.m., beginning October 9.

#### COAL MINING

### Professor THOMPSON

## Mr. Perkin

The entrance requirements are similar to those in the department of Civil and Mechanical Engineering. (See page 333). Attendance for two sessions at the Leeds City classes is accepted as a qualification, and the standard of the entrance examination is correspondingly lower.

#### Three Years' Coal Mining Course

This course is intended for miners and sub-officials who are occupied in or about collieries, and can only attend for one afternoon per week, but desire to qualify themselves for Managers' Certificates under the C.M.R. Act, and particularly for those who have attended complete courses of instruction in Mining at one of the local centres appointed by the West Riding County Council, or have attended the preparatory evening courses of the Leeds City Council.

The course extends over three years. The first and third year students attend on Mondays from 3 to 7 p.m.; the second year students on Tuesdays during The instruction in Engineering, the same hours. Electrical Engineering, and Geology is given in the respective departments, the remaining subjects in the Mining Department. In the class on Mathematics the subject is dealt with entirely from the mining point of view, the examples being taken from mining practice. Students are given mining data in the examples set, and are required to copy these out into an indexed pocketbook to form a nucleus for the observations which they subsequently make as a result of their own experience. A similar mode of treatment is adopted for the Chemistry course, the properties of matter and chemical change being illustrated as far as possible from ordinary examples to be met with at a coal mine. In addition to the course of Surveying drawing, a course of practical work in the use of surveying instruments is given. Lectures are given in connection with the two Surveying courses as they become necessary to explain the work in hand.

The first and third year courses begin on Monday, October 8, and the second year on Tuesday, October 9. Students must register their names and take out their class tickets on either October 8 or 9, between 2 and 3 p.m.

#### Syllabus

First Year Mathematics Engineering Engineering Laboratory Mining Second Year Mining Chemistry of Coal Mining Surveying Geology

Third Year

Electricity Mining Electrical Engineering Laboratory

#### Special Course

To suit the convenience of students who are not able to attend the above course, a special course of lectures will be given on Saturdays, from 7 to 8 p.m.

During the present session, the subjects of the course will include: Introductory matter dealing with the physical characters of coal and coal seams, boring, breaking ground (including coal cutting and the use of explosives), linking, methods of working coal seams.

#### TEXTILE INDUSTRIES<sup>1</sup>

Professor BEAUMONT

Mr. Hollis Mr. Yewdall Mr. Whowell

Mr. LAW Mr. FARLEY

Mr. Fox

Mr. Holloway

#### Woollen and Yarn Manufacture

*First Year*: Lectures, on Thursdays, from 7 to 8 p.m.; Recording Experiments and Testing, on Thursdays, from 8 to 9 p.m.; Sketching Machine Details, on Fridays, from 8 to 9 p.m.

Second Year: Lectures, on Thursdays, from 8 to 9 p.m.; Sketching Machine Details, on Wednesdays, from 7 to 9 p.m.; Recording Experiments and Testing, on Thursdays, from 7 to 8 p.m.; Experimental Spinning, on Fridays, from 7 to 9.30 p.m.

#### Worsted Yarn Manufacture

*First Year*: Lectures, on Fridays, from 7 to 8 p.m.; Recording Experiments and Testing, on Fridays, from 8 to 9 p.m.; Sketching Machine Details, on Thursdays, from 8 to 9 p.m.

Second Year: Lectures, on Fridays, from 8 to 9 p.m.; Recording Experiments and Testing, on Fridays, from 7 to 8 p.m.; Sketching Machine Details, on Tuesdays, from 7 to 9 p.m.; Experimental Spinning, on Thursdays, from 7 to 9.30 p.m.

<sup>1</sup> For further details see the special prospectus of the Textile Industries Department or the Evening Class prospectus,

#### Designing and Weaving

*First Year*: Lectures, on Tuesdays, from 7 to 8 p.m.; Pattern Analysis, on Tuesdays, from 8 to 9 p.m.; Sketching Machine Details, on Fridays, from 7 to 8 p.m.; Design Practice and Calculations, on Fridays, from 8 to 9 p.m.

Second Year: Lectures on Designing and Weaving, on Wednesdays, from 7 to 8 p.m.; Lectures on Colouring, on Wednesdays, from 8 to 9 p.m.; Pattern Analysis, on Mondays, from 7 to 8 p.m.; Design Practice and Calculations, on Mondays, from 8 to 9 p.m.; Sketching Machine Details, on Thursdays, from 7 to 8 p.m.; Experimental Weaving, on Thursdays, from 8 to 9.30 p.m.

Third Year: Lectures on Designing, on Mondays, from 7 to 8 p.m.; Lectures on Colouring, on Mondays, from 8 to 9 p.m.; Pattern Analysis, on Wednesdays, from 7 to 8 p.m.; Experimental Weaving, on Wednesdays, from 8 to 9.30 p.m., and on Thursdays, from 7 to 9.30 p.m.

#### DYEING AND TINCTORIAL CHEMISTRY

Professor Green Mr. Steven

Candidates for admission to either course in this department are required to produce evidence of a sufficient preliminary training in Chemistry.

The courses of instruction will consist of Lectures and Experimental Dyeing, either of which can be attended separately.

#### Lecture Course

A course of twenty-five lectures on the technology of the Textile Fibres, Dyeing and Dyeing Materials will be given on Mondays from 7 to 8 p.m., beginning October 8.

The course is intended to meet the needs of practical men and foremen dyers.

#### **Experimental Dyeing Course**

This class is held on Mondays, between 8 and 10 p.m. It is intended for apprentice and foremen dyers, or others engaged in practical work during the day, and will also be

found useful for all those who in their daily business handle dyed materials. No previous knowledge of dyeing is required from those attending.

Students in this class will make systematic dyeing trials with the different groups of natural and artificial dyestuffs.

#### LEATHER INDUSTRIES

#### Professor PROCTER

## Mr. BRUMWELL Mr. McCandlish

Candidates for admission to the course in this department are required to produce evidence of a sufficient preliminary training in Chemistry.

#### Chemistry as Applied to Leather Manufacture

A course of lectures on Wednesdays, from 7 to 8 p.m., followed by practical work from 8 to 9.30 p.m. The introductory lecture will be given by Professor Procter on October 3; the remaining lectures by the junior members of the Staff.

## II. Classes in Non-Technological Subjects

The evening class session in these subjects covers the first and second University terms.

The fees vary according to the classes attended.

#### ENGLISH LITERATURE

#### Some Types of the Drama

A course of ten lectures by Professor Vaughan on Fridays at 7.30 p.m. during the first term, beginning October 12. Fee for the course, 5s.

#### ECONOMICS

#### **General** Economics

A class in General Economics, conducted by Professor Clapham, will be formed, if desired, suitable for students preparing for the final examination of the Bankers' Institute,

or for others who have already an elementary knowledge of Economics. The course will comprise eighteen lectures, nine before and nine after Christmas, and will begin on Thursday, October 18, 1906, at 7 p.m.

Those who wish to join this class are requested to communicate with Professor Clapham not later than October 13.

Fee for the course, 10s.

#### Income and Property Taxes, their History and Principles

A course of five lectures by Professor Clapham, on Fridays at 8 p.m., beginning October 26, 1906. Fee for the course, 35.

#### The Law of Income Tax

A course of five lectures by Dr. Chapman, on Fridays at 8 p.m., beginning January 18, 1907.

Fee for the course, 3s.

## Scholarships

The Scholarships tenable by Evening students are the Baines Free Scholarships, and the Clothworkers Evening Scholarships for the Department of Textile Industries. For particulars see the list of University Scholarships, page 365.

## EXTENSION LECTURES

#### Honorary Secretary: F. W. MOORMAN, B.A., Ph.D., Assistant Professor of English Literature.

The University supplements the academic work carried on within its walls by instituting courses of Extension Lectures for those who are unable to attend the classes held in the University itself. With this end in view, it has secured the services of members of its staff who have had experience as teachers, and whose subjects are most likely to prove of interest to University Extension audiences. It has also added to its list of Extension Lecturers the names of scholars who are not members of the University staff, but who have made a special study of subjects of higher education suitable for Extension courses.

#### LOCAL ARRANGEMENTS

Before the University can undertake to provide for the delivery of a course of Lectures in any particular locality, the following steps must be taken :

- 1. A Local Committee must be appointed. Such Committee may be :
  - (a) A Committee specially appointed for this purpose;
  - (b) A public body, such as the Education Committee of a County or County Borough, the Education Committee of a Co-operative Society or Trades Union Council, the Committee of a Public Library or of some other organised institution.
- 2. A fund sufficient to cover the University charges must be guaranteed by the Local Committee.

#### LECTURE COURSES

The following courses of University Extension Lectures can be provided :

Sessional Courses	Twenty to twenty-four lectures.
Terminal Courses	Ten to twelve lectures.
Semi-terminal Courses	Not less than five lectures.
Pioneer Courses	Not more than four lectures.

Lectures are given either in successive or alternate weeks, usually in the first and second terms (October—March). Each lecture lasts, as a rule, about an hour, and is followed, or preceded, by a class. The holding of the class is a matter of great importance, the object being to give opportunity for a fuller discussion of the matter contained in the lectures, and to bring the lecturer into closer touch with his audience. Questions bearing on the lectures are also set by the lecturer ; the written answers to such questions are sent to the lecturer by post, and are then corrected by him and returned at the following class. In connection with some of the lecture courses, arrangements are made to supplement the lecture and class by excursions of an educational character.

#### EXAMINATIONS AND CERTIFICATES

At the conclusion of a sessional or terminal course of lectures the University appoints an Examiner, who is not the Lecturer, to examine those students who, having fulfilled the requirements for entrance to the examination, desire to compete for a certificate. Students are not admitted to this examination unless they have attended at least three-fourths of the lectures and classes, and have satisfied the lecturer with their written work. All candidates for certificate examinations must have reached the age of fifteen years.

Students who pass the examination held on the conclusion of a sessional course are awarded a sessional certificate; those who pass the examination held on the conclusion of a terminal course are awarded a terminal certificate.

No certificate is awarded on a course of less than ten lectures; but, if desired, an examination may be held at the conclusion of a semi-terminal course.

In certain cases, candidates may be awarded, after examination, the terminal certificate on the work of two semi-terminal courses.

In all awards of certificates, weight is given to the weekly papers as well as to the final examination.

#### SYLLABUSES

The ground to be covered by the lectures and the mode of treatment adopted are indicated by a Syllabus, published at the commencement of the course. The Syllabus contains lists of books recommended, and the lecturer gives advice as to the choice of books and methods of study.

#### Extension Lectures

#### TRAVELLING LIBRARIES

Travelling Libraries are issued by the University, in connection with courses of University Extension Lectures, each Library containing a selection of books, chosen by the lecturer as the most suitable to be studied for the course concerned.

#### EXPENSES

For particulars of financial arrangements in connection with the establishment of Extension courses, see the special prospectus.

The Education Committee of the West Riding County Council is prepared, in certain cases, to make grants to local authorities within the area of the West Riding County Council, to assist them in meeting the expenses incurred in connection with the delivery of lecture courses. For fuller information on this matter, Local Committees should apply to the Education Department, West Riding County Council, Wakefield.

#### PROSPECTUS

The Registrar will send, on application, a prospectus containing further information as to the organisation of Extension courses, together with a complete list of lecturers and subjects in the departments of Arts (including Fine Art), Science (including Medicine), and Law.

## COUNTY LECTURES IN AGRICULTURE, &c.

The County Councils of the three Ridings of Yorkshire make annual grants to the University to enable it to carry out a system of instruction on subjects connected with Agriculture, and in the case of the West Riding to give practical instruction also in dairy work at various centres.

The members of the staff engaged in this work are: Prof. R. S. Seton, Mr. R. W. Haydon, Mr. Charles F. Archibald, Mr. J. G. Stewart, Mr. F. Parton, Mr. T. Redington, Mr. A. Gaut, Miss McKerrow, and Mr. W. Jones Anstey.

#### County Lectures in Agriculture

#### **County Lectures**

Each course consists of five or ten lectures given in the evenings at intervals of one week. Each lecture may be followed by a class at which questions may be asked of the lecturer. Before the University enters into any arrangements with a locality for the delivery of such a course of lectures, a Local committee must be appointed, with a secretary to correspond with the University. The Local committee will be required to guarantee a certain average attendance, also the local expenses, consisting of hire of hall, advertising, &c. With these exceptions the lectures will be given free.

The subjects treated in the several courses embrace: Results of Garforth experiments, soils and their properties, manures, farm crops, insect pests and diseases of crops, the management of grass land, live stock and feeding stuffs, dairying and poultry keeping, horticulture and fruit culture, small farming and gardening, management of allotments, the foot of the horse, and the principles of horse shoeing.

#### Dairy Instruction

The Dairy School at Garforth is open for practical instruction during the summer months. Courses of six weeks' duration are given in butter and soft cheese making.

The fee for the course is  $\pounds_3$ .

Single demonstrations on butter-making are given at centres in the East and West Ridings, in the interval between the courses held at Garforth.

#### Field Experiments

The Agricultural department of the University undertakes the laying out and supervision of field experiments to illustrate the principles of agricultural and horticultural practice.

Reports on these experiments may be had on application to the Professor of Agriculture.

#### Instruction in Horticulture in Schools in the East and West Ridings

The Agricultural department of the University supervises the instruction in horticulture given in school gardens connected with various evening continuation schools in the East and West Ridings.

344

#### Instruction in Horticulture at Garforth

A course of Horticulture and Experimental Plant Physiology will be conducted on Saturdays at the Manor Farm, Garforth, beginning on September 8, 1906, and concluding about the end of the following May. The class is for teachers of Horticulture and those intending to teach this subject. The mornings will be given to the discussion of the principal horticultural processes and their actual practice in the garden, and the afternoons to botany.

The fee for the course is  $f_{11}$  12s. 6d.

#### Instruction in Farriery

Instruction in Horse Shoeing has been provided for and takes the form of practical demonstrations in the making of shoes and the shoeing of horses in smithies easily accessible to apprentice smiths in different localities. The work is so arranged that the apprentices attend one afternoon or evening in each week during the period the Instructor is in attendance. The classes are preceded by a lecture on the foot of the horse and the principles of horse shoeing, and at the conclusion of the lecture those smiths who intend to join the practical class are asked to give in their names.

## COUNTY LECTURES IN COAL MINING

Courses of County lectures in Coal Mining are also delivered in various coal mining districts, consisting of twelve lectures each, and comprising four lectures on the Chemistry and four on the Geology of Coal Mining, with four lectures on the Theory and Practice of Mining. Application for courses of lectures should be made to the Registrar, at the University, Leeds.

## FELLOWSHIPS, SCHOLARSHIPS, EXHIBITIONS, BURSARIES, FREE STUDENTSHIPS, AND PRIZES

#### GENERAL REGULATIONS

#### Applicable to all Scholarships

1. No election to a Scholarship will take place unless the candidate has attained a sufficient standard of merit.

2. All Scholarships are held subject to the good behaviour of the Scholar. The Council reserves the power to determine the tenure of a Scholarship for the Scholar's irregularity in attendance at lectures, or for any other sufficient cause. A Scholar 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 Scholarship, unless his retention of it be specially recommended by the Senate.

3. Scholars are required to devote the whole of their time to their studies. Except in special cases, the undertaking by a Scholar of outside work, such as teaching, or the acceptance of any post of profit outside the University will involve surrender of the Scholarship, unless such work be undertaken with the sanction of the Vice-Chancellor. The Clothworkers' Scholars and others preparing for any profession or trade, the principles of which are taught in the University, will be granted special exemption from this rule if the Senate is satisfied that an adequate cause has been shown for such exemption, and approves the arrangement proposed in each particular case.

4. The Senate reserves power to declare any Scholarship or Exhibition vacant or to reduce its value on the ground that the Scholar has previously or subsequent to his election acquired another Scholarship.

5. Scholars 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.

#### Applicable to Senior Scholarships

6. A student holding a Senior Scholarship open only to registered students of the University will not be allowed to compete a second time for a Scholarship without the express permission of the Senate.

#### Applicable to Entrance Scholarships

7. Candidates for an Entrance Scholarship may be required to undergo a *vivå voce* examination, in addition to the examination by written papers.

#### Applicable to Scholarships awarded at Matriculation

8. The University does not charge any fee to candidates who present themselves at the Matriculation examination *as Scholarship candidates only* and who do not require any certificate of having passed the examination for Matriculation purposes.

9. Those who are candidates for Matriculation as well as for Scholarships must conform to the Regulations of the Joint Matriculation Board as to filling up the prescribed entrance form and paying the Matriculation fee of  $\pounds_{12}$ .

10. In certain cases (see Regulations for the separate Scholarships), successful candidates are required to pursue degree courses in the University as a condition of the tenure of their Scholarships. Should such candidates not have paid the Matriculation fee of  $\pounds 2$  prior to the examination they will be required to pay it before entrance at the University. On payment of it they will be entitled to Matriculation certificates.

#### I. UNIVERSITY FELLOWSHIPS

A limited number of Fellowships may be awarded to students who have shown special merit in the Final examinations in the Honours Schools of the University, for the purpose of assisting them to prosecute research and study of a post-graduate character.

A scheme of Regulations for the award and tenure of these Fellowships is under consideration.

1905 Marshall, Joseph, B.Sc. (Chemistry). £100. Waterhouse, Osborn, B.A. (English). £100.

## II. SCHOLARSHIPS TENABLE ONLY BY GRADUATES OF THE UNIVERSITY

#### I. University Scholarships

A limited number of Scholarships may be awarded to students who have shown special merit in the Final examinations in the Honours Schools of the University.

A scheme of Regulations for the award and tenure of these Scholarships is under consideration.

- 1905 Armes, Henry Percy, B.Sc. (Chemistry). £50.
  <sup>1</sup>Gunnell, Doris, B.A. (Modern Languages). £50.
  <sup>1</sup>Holmes, Carrie, B.A. (English). £50.
  Edwards, Maud Mary, B.A. (Modern Languages). £25.
  Gregory, Frederick Maurice, B.Sc. (Engineering). £25.
- Hodsman, Henry James, B.Sc. (Chemistry). £50.
   Butterworth, George William, B.A. (Classics). £25.
   Holgate, Edward, B.Sc. (Engineering). £25.

#### 2. Gilchrist Studentship in Modern Languages

This Studentship was instituted in 1905 by the Gilchrist Educational Trust, founded by Dr. Gilchrist, who died in 1841, for "the benefit, advancement and propagation of education and learning in every part of the world, as far as circumstances permit." It is of the value of  $\pounds 80$ , is tenable for one year, and is open for graduates of either sex who have taken Honours in Modern Languages in the Final degree examination of the University, and who are proposing to enter the profession of teaching in secondary schools. The purpose of the Studentship is to enable the holder to pursue a special course of study abroad with a view to qualifying himself (or herself) for teaching modern languages in a secondary school.

The regulations are as follows:

1. The Studentship is awarded annually by the Gilchrist Trustees.

2. Candidates must have obtained Honours in Modern Languages in the Final examination for a degree, and be recommended by the University after consultation with the Professors concerned, and after special inquiry into the suitability of the candidates for the profession of teacher in a secondary school. If possible, two names shall be submitted each year to the Trustees for their consideration.

<sup>1</sup> Renewed in 1906.

Save in exceptional circumstances, of which the Trustees shall be the sole judges, the examination must be that immediately preceding the date of application.

3. The holder of the Studentship will be required to follow a course of preparation for the profession of Modern Language teacher, and must submit his (or her) proposed course of work for the approval of the Trustees, who will take steps to satisfy themselves that the course of preparation proposed to be undertaken is suitable for the purpose in view.

4. The tenure of the Studentship is for one year beginning on the date of election, and the emoluments will be paid half yearly by the University on production of evidence that the proposed course of preparation is being satisfactorily carried out.

5. The Student will be required, at the expiration of the tenure of the Studentship, to make a report to the University, setting out the course of work and preparation which has been pursued, and this report together with a covering communication from the University shall be forwarded to the Trustees.

#### 3. Research Scholarship in Dyeing

This Scholarship, of the value of  $\pounds 60$  a year, tenable in the Department of Dyeing and Tinctorial Chemistry, will be awarded annually upon the results of the Final examination for the B.Sc. degree, preference being given to candidates who graduate with Honours in Applied Chemistry (Colour Chemistry and Dyeing).

The Scholarship will be awarded for one year, but may, at the discretion of the Examiners, be extended to a second year.

The Scholar will be required to devote his whole time to carrying out some special branch of research in Colour Chemistry or Dyeing.

#### III. 1851 EXHIBITION SCIENCE SCHOLARSHIP

Since 1891 the Commissioners for the Exhibition of 1851 have placed at the disposal of the Yorkshire College, now the University of Leeds, the nomination to one Scholarship of the annual value of  $\pounds_{150}$ , tenable ordinarily for two years, and in rare instances for three years. The

continuation each year after the first will depend upon the work done in the previous year being satisfactory to the Scientific Committee appointed by the Commissioners.

The Scholarship is limited to those branches of science (such as Physics, Mechanics, and Chemistry), the extension of which is specially important for our national industries.

Candidates must (a) be British subjects; (b) be bona fide students of science of three years' standing at least in Universities or Colleges in which special attention is given to scientific study; (c) either have been engaged in study at the University for a full year prior to the 1st of April following the date of application, or have been students of the University for a full year ending within twelve months prior to the 1st of April following the date of application, and, having since ceased to be students, have been engaged solely in scientific study; (d) indicate high promise of capacity for advancing science or its applications by original research.

A recommendation can only be made in favour of a student who has already given proof of both ability and desire to make original investigations. In the opinion of the Commissioners the most suitable evidence that a candidate possesses these qualifications is a satisfactory account of a research already completed by him, and they will decline to confirm a recommendation unless such an account is furnished, or there is other equally distinct evidence that the qualifications of the candidate are such as are above indicated.

Applications will be received by the Registrar of the University up to the last day of February in each year.

1891-4	Ingle, Harry, B.Sc.
1892-4	Mann, Harold Hart, B.Sc.
1893-6	Myers, John Ellis, B.Sc.
1894-6	Dent, Frankland, B.Sc.
1896-9	Dawson, Harry Medforth, B.Sc.
897-1900*	Wilson, Harold Albert, B.Sc.
898-1901	Calvert, Harry Thornton, B.Sc.
899-1902	Skirrow, Frederick William, B.Sc.
1900-3	Varley, William Mansergh, B.Sc.
1901-4	Denison, Robert Beckett, B.Sc.
1902-5	Dakin, Henry Drysdale, B.Sc.
1903-6	Gaunt, Rufus, B.Sc.
1904-7	Raper, Henry Stanley, B.Sc.
1905-7	Zortman, Israel Hyman, B.Sc.
1906-8	Armes, Henry Percy, B.Sc.

## IV. SCHOLARSHIPS OPEN TO THE COMPETITION OF STUDENTS OF THE UNIVERSITY ONLY

# I. Tenable in the Faculties of Arts, Science and Technology

#### Leighton Trustees' Scholarships

These Scholarships were instituted in 1894 by the Trustees of the late Mrs. Isabel Leighton of Leeds.

Candidates must be registered students of the University of not less than two terms standing. They must have attended a Public Elementary school or schools in the City of Leeds for not less than three years.

Three Scholarships are ordinarily offered each year, each of the annual value of  $\pounds_{10}$ , and tenable for two years, subject to the reports on the student's work during the first year of tenure being satisfactory.

The Scholarships will not be awarded on any special examination, but those students who are desirous of becoming candidates are required to send in their names to the Registrar not later than May  $\tau$  in each year.

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 pecuniary assistance will also be taken into consideration.

The Scholarships are tenable by day 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.

The election will be made in the third term of the session, provided that there be suitable applicants.

1894	Gough, William	1902
1895	Hampshire, Florence	
	Elizabeth	
1896	Shacksnovis, Reuben	1903
1897	Porritt, Florence Mary	
	Scholes, Thomas Wilfrid	
1898	Gawler, Robert	1904
1899	Crosfill, John	
	Phillipson, Coleman	
1900	Savage, Hilda	
	Robinson, Ethel Margaret	1905
1901	Burgess, Lillie	_
-	Scholefield, Fred	1906

1902	Calam, Harold
	Landman, Samuel
	Stead, Frank Cawthron
1000	Applanand John Europe

- 1903 Appleyard, John Ernest Robinson, Lilian Dorothea Waite, Joseph Henry
- 1904 Carlton, George Westerdale Maddison, Wilfred Guy Thorp, George

1905 Lacy, Arthur Vernon, Edgar

1906 No award

## 2. Tenable in the Faculty of Arts

#### Salt Scholarship

This Scholarship was founded by the late Sir Titus Salt, Bart., in 1875.

Candidates must be scholars or registered students of the University in at least their sixth term.

The value of the Scholarship is  $\pounds_{20}$  a year, and it is tenable for two years.

The Scholarship is awarded at the discretion of the Senate, with or without examination.

The Scholar elected will be required to pursue a course of study at the University preparatory for a degree in Arts of the University of Leeds.

1882	Wright, Benjamin	1897	Robinson, Elizabeth Clare
1885	Barker, Arthur Henry	1899	Melville, Ellen Louisa
1887	Jackson, Thomas Chalice	1901	Stevenson, Ethel Mary
1891	Hurst, Thomas Ockerby	1903	Davis, William Hathaway
1893	Cleasby, Mabel		Landman, Samuel
1895	Hornby, George Goodall	1906	Gill, William Conrad

## 3. Tenable in the Faculty of Medicine

#### Infirmary Scholarship

This Scholarship was founded in 1888 by the Faculty of the Leeds General Infirmary. It is of the value of 40 guineas and consists of a free ticket to the clinical teaching of the Leeds Infirmary. The holder is required to enter as a student for the whole medical curriculum at the University in the session following the date of examination.

Previously to 1906 this Scholarship was awarded as an Entrance Scholarship, on the results of an examination in Arts subjects. It is now awarded, after a report from the examiners, on the results of the First M.B. examination of the University of Leeds, held in June of each year. Entry forms must be sent to the Secretary of the Faculty, General Infirmary, Leeds, not later than June 1.

1889	Fearnsides, Philip Henry	1894
1890	Gross, Phineas	1895
1891	Greenwood, Henry Harold	1896
1892	Field, Richard Cullingworth	1897
- 000	Dambingt Wilfrid Arthur	7808

Andrews, Joseph Dalby
Pegler, William Vernon
Matthews, Crawford Tait
Middlemiss, James Ernest

1893 Dewhirst, Wilfrid Arthur 1898 Heald, Samuel Linley

352

1899	Smailes, William Herbert	19
1900	Gough, Alfred	19
1901	Rawlings, Harry Richard-	19
	son	19
1002	Pickles, William Norman	

Carlton, George Westerdale 903 904 No award No award 905 206 Fisher, John Barugh

## 4. Tenable in the Faculty of Technology

#### Clothworkers' Company Day Scholarships

These Scholarships were founded in 1875 by the Worshipful Company of Clothworkers of the City of London, who offer three Scholarships, each of the value of  $\pounds_{25}$ , to students in the Department of Textile Industries. Two of these Scholarships are awarded to students at the beginning of their second year, and one to a student at the beginning of his third year.

Each Scholarship is tenable for one year. Students holding Day Scholarships will be required to attend an Advanced Course in Textile Industries, and the Senior Class in Applied Art. The Day Scholarships are only tenable by students not more than twenty-four and not less than sixteen years of age on the 1st of October following the date of examination.

Students holding Scholarships are expected to present themselves for examination (in the University) by the City and Guilds of London Technical Institute, in one of the following subjects, viz. : Textile Fabrics-Spinning and Weaving of (a) Wool and Worsted, (b) Cotton, (c) Linen, (d) Silk.

The Scholarships will be awarded on the result of an examination in Designing of Single and Backed Fabrics, Spinning or Weaving Mechanism, the Processes of Manufacturing, and Freehand Drawing.

Candidates for the Scholarships awarded at the beginning of their second year will also be required to undergo a preliminary examination in English Dictation and Composition, Arithmetic and Algebra, as far as simple equations.

The next examination will begin on Tuesday, May 14, 1907. Entry forms must be sent to the Registrar not later than May 1.

1901	Grimshaw, Norman	1902	Mellor, Cecil Smith
-	Wilson, Stanley Ewart Ashley		Duncan, Harold
	Brigg, Lawrence Heriot		Gaunt, Frederick William
	O'Flynn, James		Munro, William Thow

1903 Smith, Lister Rayner, Harold Kingsbury Hodgson

Horsham, Wilfred Robert Beaumont, Frank

- 1904 Whitworth, Abraham Hart, Harry Leatham Horsham, Wilfred Robert Holloway, Joseph
- 1905 Mills, James Hart, Harry Leatham Bradley, Jim Broadbent, Lees
  1906 Broadbent, Lees Cockcroft, Ernest Edward Mills, James Sutcliffe, Arthur Livsey

#### V. ENTRANCE SCHOLARSHIPS

# I. Tenable in the Faculties of Arts, Science, and Technology

#### Leeds City Council Scholarship

This Scholarship was founded by the Council of the University, in 1892, out of the sum voted by the Leeds City Council.

Candidates for this Scholarship must not have been previously registered students of the University, and must be under the age of nineteen years on the 30th of September following the date of examination. The Scholarship can be held only by students living with their parents or guardians resident in the City of Leeds.

The Scholarship is of the annual value of  $\pounds 50$ , and will be tenable, subject to the continuance of an adequate grant by the City Council, for three years.

The Scholar will be required to pursue such a course of study in the University as shall, in the opinion of the Senate, constitute an effective preparation for a degree in Arts or Science of the University, or for the pursuit of some branch of industry, instruction in the principles of which is given in the University.

Leeds City Council Scholarships are not tenable by students who propose to enter, or who have already entered, on courses of study in the Faculty of Medicine, unless they are reading for the B.Sc. degree of the University of Leeds.

Previously to 1906 this Scholarship was awarded after a special examination. It is now awarded on the results of the July Matriculation examination. Candidates are required to take higher papers in two subjects at this examination, at their own choice. Entry forms must be returned to the Registrar not later than May 1.

354

1892	Hefford, Charles Nelson	1900	Cunningham, Jean Orme
1893	Watson, Herbert Wood	1901	Phillipson, Abram
1894	Cooper, Albert Henry	1902	Mellor, Fred
1895	Findlay, Mary Grace		Klein, Harris
1896	Whiteley, Charles Edward	1904	Crowther, William Edmund
1897	Chapman, Fitzroy Tozer	1905	<sup>1</sup> Simpkiss, Nellie
1898	Gray, Arthur Lambert		<sup>1</sup> Webster, Herbert William
1899	Grant, Frederick Ernest	1906	Bannister, Albert

#### Emsley Scholarship

This Scholarship was endowed in 1886 by the late Thomas Emsley, Esq., of Burley-in-Wharfedale, who bequeathed  $f_{1,000}$  for the purpose of founding one or more Scholarships in the Yorkshire College.

Candidates for this Scholarship must not have been previously registered students of the University, and must be under the age of nineteen years on the 30th of September following the date of examination.

There will, as a rule, be offered one Scholarship annually, of the value of  $f_{20}$ , tenable for two years.

The Scholar will be required to pursue a course of study prescribed for a degree in Arts or Science of the University, or an alternative course in the Faculties of Arts, Science, and Technology, expressly approved by the Senate.

The Scholarship is not tenable in the Department of Textile Industries.

Previously to 1906 this Scholarship was awarded after a special examination. It is now awarded on the results of the July Matriculation examination. Candidates are required to take higher papers in two subjects at this examination, at their own choice. Entry forms must be returned to the Registrar not later than May 1.

1887	Croft, Emily	1897	Oddy, Annie Maude
1888	Houfton, Ernest Henry	1898	Hunt, Arthur Douglas
1889	Hurst, Thomas Ockerby	1899	Robinson, Ethel Margaret
1890	Byles, William Esdaile	1900	Findlay, George Hindson
1891	Oyston, William Fletcher	1901	Landman, Samuel
1892	Jackson, Edwin	1902	Conyers, Hilda
1893	Bell, Ambrose John	1903	Bibby, Edward Ernest
1894	Barley, Bunten Archibald	1904	Brook, Annie
	Hurd	1905	Leslie, May Sybil
1895	Corrie, William Edward	1906	Wigglesworth, Frank
1806	Christien, Alfred Eustace		

1 Scholarship divided.

#### Entrance Scholarships

#### Edward Baines Scholarship

The Edward Baines Scholarships, founded in 1885, are established by the University in consideration of the sum of  $\pounds$ 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 to candidates who have attended a Public Elementary School within the City of Leeds; the other half to such candidates as the Yorkshire Union of Mechanics' Institutes shall, after examination, select. Particulars of the latter Scholarships may be obtained from the Secretary of the Yorkshire Union of Mechanics' Institutes, South Parade, Leeds. (See also page 365).

Candidates for the Edward Baines (Day) Scholarship must not have been previously registered students of the University, and must be under the age of nineteen years on the 30th of Septemberfollowing the date of examination. They must have attended a Public Elementary School in the City of Leeds.

There will be offered in each year one Scholarship, of the value of  $\pounds_{20}$  a year, tenable for two years.

The Scholars will be required to pursue a course of study prescribed for a degree in Arts or Science of the University, or an alternative course in the Faculties of Arts, Science, and Technology, expressly approved by the Senate.

The Scholarship is not tenable in the Department of Textile Industries.

Previously to 1906 this Scholarship was awarded after a special examination. It is now awarded on the results of the July Matriculation examination. Candidates are required to take higher papers in two subjects at this examination, at their own choice. Entry forms must be returned to the Registrar not later than May 1.

1888 1891 1892	Hutchinson, Herbert Legg, Thomas Percy Dawson, Harry Medforth Parker, George Robert Hampshire, Florence	1899 1900 1901	Stevenson, Ethel Mary Savage, Hilda McKeand, Maggie Woodrow Calam, Harold Robinson, Lilian Dorothea
	Elizabeth	1903	Wilson, Florence Grey
1895	Warmington, Edith	1904	Hargreaves, Edith
1896	Scholes, Thomas Wilfrid	1905	Christie, John Hugh
1897	Westerman, Ethel	1906	Marsh, Frank Salton

## 2. Tenable in the Faculty of Arts Charles Wheatley Scholarship

This Scholarship was established by the University in 1903, in consideration of the sum of  $\pounds$ 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.

Candidates for this Scholarship must not have been previously registered students of the University, and must be under the age of nineteen years on the 30th of September following the date of examination.

The Scholarship is of the annual value of  $\pounds 25$ , tenable for three years, and will be awarded as often as the funds at the disposal of the Trust admit.

The Scholar elected will be required to pursue a course of study at the University preparatory for the B.A. degree of the University.

Previously to 1906 this Scholarship was awarded after a special examination. It is now awarded on the results of the July Matriculation examination. Candidates are required to offer in this examination at least two languages, whether at the ordinary or at the higher standard, and to take higher papers in two subjects chosen from English Literature, History, Greek, Latin, French, and German. This Scholarship will not be awarded in 1907.

1904 Scholes, Katharine Louise1905 Frank, Dorothea Ethel1906 Batchelor, Edith

1900 Batchelor, Euten

#### William Summers Scholarship

This Scholarship was founded by Mr. and Mrs. Buckley, of Ryecroft Hall, Audenshaw, near Manchester, in memory of William Summers, Esq., late M.P. for Huddersfield, and for many years a member of the Court of the Victoria University.

Candidates for this Scholarship must have been resident in the Parliamentary Borough of Huddersfield during one full year previous to the 1st of June of the year in which they compete, or must have attended a public school in the said Borough for the same period. The Scholarship is tenable for three years. Any accumulations of the Scholarship Fund will be expended by the Council as it may from time to time determine in prizes or exhibitions for candidates who shall have acquitted themselves sufficiently well in the examination without having obtained the Scholarship.

The successful candidate shall be required to pursue in the University of Leeds a regular course of study in one of the following Honours Schools: (1) Classics; (2) History; (3) English Language and Literature; (4) Philosophy; or any other Honours School in the Faculty of Arts, approved by the Senate. Such course shall be commenced in the October next after election to the Scholarship.

The Scholarship is awarded on the results of the July Matriculation examination. Candidates are required to offer in this examination at least two languages, whether at the ordinary or at the higher standard, and to take higher papers in two subjects chosen from English Literature, History, Greek, Latin, French, and German. Entry forms must be returned to the Registrar not later than May 1.

> 1905 Hirst, John Crosland 1906 Dearnley, Charles

# 3. Tenable in the Faculties of Science and Technology

#### Brown Scholarships

These Scholarships were endowed in 1877 by the late Henry Brown, Esq., of Bradford and Rawdon, who bequeathed  $\pounds 5,000$  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. (See also page 367).

Candidates for these Scholarships must not have been previously registered students of the University, and must be under the age of nineteen years on the 30th of September following the date of examination.

In general there will be offered in each year one or two Scholarships of  $\mathcal{L}_{40}$  a year, each tenable for two years, with power of extension. Applications for extension must be sent to the Registrar before the end of the second term.

A preference will be given, cæteris paribus, 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.

Brown Scholars will be required to pursue a course of scientific or technical study which will qualify for a degree in Science, or for a diploma of the University, or otherwise to devote themselves, in a manner approved by the Senate, to the study of one or more branches of pure or applied science taught in the University.

Brown Scholarships are not tenable by students who propose to enter, or who have already entered, on courses of study in the Faculty of Medicine, unless they are reading for the B.Sc. degree of the University of Leeds.

Previously to 1906 the Brown Entrance Scholarships were awarded after a special examination. They are now awarded on the results of the July Matriculation examination. Candidates are required to take in this examination higher papers in two subjects, of which one must be Physics, Mechanics or Chemistry. Entry forms must be returned to the Registrar not later than May 1.

1880	Senior, William Otte	1893	Chapman, Harold Percy
	Skirrow, Benjamin Beck	1894	Dalton, John Edwin
1881	Overend, Wilkinson	1895	Leach, Elsie
	Easterfield, Thomas Hill	15	Robinson, Elizabeth Clare
1882	Courtice, George Robert	1896	Blackburn, William
	Aulton		Broughton
1883	Teanby, George William		Hinchcliff, Joseph Henry
5	Alvey	1897	Forsyth, Christina Brand
1885	Marriner, William Wright		Hunt, Francis William
1886	Jennison, Francis Herbert	1898	Hummel, Alfred Roland
1887	Hartley, Thomas	-	Ure
1888	Mann, Harold Hart		Lodge, Harry Livingstone
	Parkin, Ernest	1899	Goodson, Ethel Elizabeth
1889	Smith, James Cowlishaw		Grimshaw, Norman
-	Cobb, John William	1900	Gough, Alfred
1890	Crouch, John Peachey	1901	Booth, Meyrick
-	Norman, Frank Meade	1902	Armes, Henry Percy
	Peatfield, Albert Edward	-	Crosland, Percy Field
1891	Dewhirst, Wilfrid Arthur		Lord, William Ernest
-	Liversidge, Will	1903	Hodsman, Henry James
	French, James Wilson	1904	McGill, Ernest Arthur
	Duncan, John	1905	Barker, Christopher James
1800	White Arthur Lee	/ /	Watson James Arthur

- 1892 White, Arthur Lee Barber, John Watson Convers, James Reeve
- Watson, James Arthur
- 1906 Wood, George

#### Akroyd Scholarships

These Scholarships, founded in 1875, are maintained by funds accruing from the Akroyd Trust, and are intended for the encouragement of the study of Natural Science. (See also page 367.)

Candidates for these Scholarships must not have been previously registered students of the University, and must be under the age of nineteen years on the 30th of September following the date of examination.

In general there will be offered in each year one or two Scholarships of  $\pounds 40$  a year, each tenable for two years, with power of extension. Applications for extension must be sent to the Registrar before the end of the second term.

Women are not eligible to the Akroyd Scholarship.

Akroyd Scholars will be required to pursue such a course of study in the Faculties of Science and Technology, as shall, in the opinion of the Senate, constitute an effective preparation for a degree in Science or for a scientific calling.

Akroyd Scholarships are not tenable by students who propose to enter, or who have already entered, on a course of study in the Faculty of Medicine, unless they are reading for the B.Sc. degree of the University of Leeds.

Previously to 1906 the Akroyd Entrance Scholarships were awarded after a special examination. They are now awarded on the results of the July Matriculation examination. Candidates are required to take in this examination higher papers in two subjects, of which one must be Physics, Mechanics or Chemistry. Entry forms must be returned to the Registrar not later than May 1.

1877	Bothamley, Charles Herbert 1883	Tucker, Clara
1878	Briggs, William	Hick, Herbert Edward
	Ingle, Herbert	Wilson, Edwin
1879	Wilson, Albert Edward 1884	Fry, Ernest Bickersteth
	Atkinson, Thomas Francis	Moore, Ira
1880	Stables, William Herbert	Wheelwright, Edwin
1881	Taylor, Arthur	Whitfield
1882	Wright, Joseph	Pocklington, Henry Cabourn
	Allen, Harold Newman	Thompson, George Robert
	Hurtley, William Holdsworth	Booth, Robert Davis
	Wright, George Ward 1885	Duncan, William
1883	Dibb, John Hustwick	Watmough, Benjamin
	Speak, Savannah Johnson	Dains, Herbert Henry

1886	Hunt,	Tom	Harold
	Ives, ]	ames	Percy
	Sykes,	Erne	st

- 1887 Holmes, Harry Slater Booth, Frederick William Horrell, Ernest Charles
- 1888 Miall, Stephen Nicholls, Percy Myers, John Ellis Sowry, George Herbert
- 1889 Porter, John Fletcher Sunderland, Arthur Acott, Richard Harry Midgley, Harry
- Midgley, Harry 1890 Mitchell, Clifford Archdeacon, William Henry
- 1891 Holt, John Lupton Halliwell, Edward
- 1892 Turton, Édward Brown, James Herb
- Brown, James Herbert 1893 Gough, William
- 1894 Calvert, Harry Thornton

- 1895 Groocock, Henry Lloyd Robinson, Harold 1896 Shepherd, Arthur Burton 1897 Middlemiss, James Ernest 1898 Livesey, Charles Edwin Leonard 1899 White, Herbert Leslie Scholefield, Fred 1900 Willey, Edward Radcliffe, Norman Brooke 1001 Zortman, Israel Hyman Brown, John Duncan 1902
- Hollins, Cecil Harris, Marks Solomon
- 1903 Harris, Marks Solomon Horsfall, Ronald Smith
- 1904 Davies, Hamilton Sinson, Israel Lewis
- 1905 Jenkins, Gilbert Ramsden Marshall, Francis Riley, Frank
- 1906 Dudley, Harold Ward Hurst, Frank

## 4. Tenable in the Faculty of Technology

#### Craven Scholarship

This 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.

Candidates for this Scholarship must not have been previously registered students of the University and must be under the age of nineteen years on the 30th of September following the date of examination.

The Scholarship is of the annual value of  $\pounds 25$ , and is tenable by Engineering students for two years, subject to the conditions as to conduct and attendance laid down in the General Regulations (page 346). Not less than fourfifths of the value of the Scholarship is to be spent in fees. The balance will be paid to the scholar in cash.

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. The regulations for the examination are at present under revision. Particulars will be obtainable from the Registrar of the University in January, 1907.

1888	Banks, Arthur	1900	Anderson, Robert
1890	Perkin, Herbert	1901	Frazer, Edgar Hamilton
1892	Hammond, Joseph Wetheril	1903	Maddison, Wilfred Guy
1894	Millard, Frederick Stanley	1905	No award
1900	Sturgeon, Robt. Alexander	1906	No award

#### Tannett-Walker Bursaries

These Bursaries were instituted in 1900 by F. W. Tannett-Walker, Esq., of Leeds. A Bursary of  $\pounds 25$  per annum, tenable for three years, is offered to holders of Scholarships or Free Studentships at the Leeds University, who are preparing to follow the profession of an Engineer, under the following conditions:

(1) The recipient must have attended a public elementary school in Hunslet at some period of his school career, although he need not have taken his University Scholarship directly from such school.

(2) He must at the time of his election to the Bursary declare his intention of attending an approved course of education in the University for a period of not less than three complete sessions. This course will, as a rule, be that set out in the University Calendar as required for the degree of B.Sc. in Engineering of the University, either for an Ordinary or an Honours degree.

Mr. Tannett-Walker offers one such Bursary in each year, so that if an election were made each year there might be three recipients of these Bursaries in the University at the same time.

In addition to these Bursaries, Mr. Tannett-Walker offers to take into the works of Messrs. Tannett-Walker & Co. Limited, Engineers, Hunslet, the Scholar who has passed successfully through his University course, on the same footing as a premium apprentice, without requiring any premium from him, but giving to him the same amount of wages as would be earned by an ordinary apprentice.

These Bursaries will not be awarded on the result of a special examination, but holders of Scholarships and Free Studentships, who have complied with the above conditions,

362

are required to make application for them, by letter addressed to the Vice-Chancellor, as soon as possible after the elections to the Scholarships have been announced.

1900 Anderson, Robert 1904 McGill, Ernest Arthur

#### William Cooke & Co. Scholarship

This Scholarship was instituted in 1906 by Messrs. William Cooke & Co., of Sheffield.

It is of the annual value of  $\pounds_{21}$ , and is tenable for two years. It is awarded biennially.

Candidates for this Scholarship must not have been previously registered students of the University, and must be under the age of nineteen years on the 30th of September following the date of the examination.

Candidates must be either (a) mining students articled to mining engineers, colliery managers, or colliery proprietors; or (b) persons who are actually employed underground at a colliery, or who have been employed underground for a period exceeding three years.

The Scholar will be required to pursue the course of study prescribed for the Diploma in Coal Mining, and to present himself, as soon as he is properly qualified, as a candidate for that Diploma, and also for the Colliery Manager's First Class Certificate of Competency to manage a Mine. He must attend this course regularly, and must take his examinations in the proper order and at the time laid down by the Regulations of the University.

The Scholarship will be awarded on the result of an examination in (1) English Composition; and (2) Mathematics (Arithmetic; Algebra, including quadratic equations; the Elementary Geometry of triangles, parallelograms, and circles, and of similar rectilinear figures), which two subjects are compulsory on all candidates; and also in one or more of (3) Mechanics; (4) Physics; and (5) Chemistry.

In 1906, the examination will be held on September 18. In 1908 and future years it will be held at the same time as the examination for the Clothworkers' Scholarships.

## 5. Tenable in the Faculty of Medicine Medical Scholarship

This Scholarship was instituted by the Leeds School of Medicine in 1888. It consists of free admission to the lectures and practical instruction covered by the composition fees for the complete M.B. course. The Scholarship will be awarded on the results of the July Matriculation examination. Candidates will be required to take in this examination higher papers in two subjects, of which one must be Physics, Mechanics or Chemistry. Entry forms must be returned to the Registrar not later than May 1.

Candidates must be under the age of nineteen years on the 30th of September following the date of examination. They must have declared their intention, if elected, of entering the University of Leeds as students in the Faculty of Medicine.

The successful candidate will be required to enter at the University of Leeds as a student in the Faculty of Medicine, in the October immediately following the examination, to pursue, at the University of Leeds and at the General Infirmary at Leeds, the curriculum for a medical degree in the University of Leeds; and to proceed to such degree. But should the successful candidate desire to take a degree in Science or a fuller course of scientific work, before entering upon his professional studies, he shall give immediate notice of his wish to the Senate, which may, if it so determine, allow the Scholar, after passing the First M.B. examination, to postpone his attendance in the School of Medicine for one year only, during which time he shall pursue such course of study at the University as the Senate may authorise.

NOTE. Up to 1905 this Scholarship was restricted to students who had passed the First M.B. examination (Victoria or Leeds), or the Preliminary Scientific examination (London) and was awarded on the results of an examination upon the subjects of the First M.B. examination (Victoria or Leeds).

Houfton, Ernest Henry
Callum, Harold Sidney Hill
Towse, Walter
Field, Richard Cullingworth
Greenwood, Henry Harold
Turton, Edward

	Gough, William	1902	<sup>1</sup> Booth, Sydney Herbert
1896	Radcliffe, Percy Alexander		<sup>1</sup> Rawlings, Harry
	Hurst		Richardson
	Coupland, James Alane	1903	Hamilton, William Douglas
	Middlemiss, James Ernest	1904	No award
1899	Boyle, Alan	1905	
1900	Edmondson, Watts	1906	Little, Cuthbert Joseph
1901	Gough, Alfred		Harwood
	0		

## VI. SCHOLARSHIPS TENABLE AT EVENING CLASSES

#### Edward Baines Scholarships

For particulars of the institution of these Scholarships, see the Regulations for the Edward Baines Day Scholarships, page 356.

Ten or more Scholarships are given annually in teaching and text books. Candidates' names must be sent to the Secretary of the Yorkshire Union of Mechanics' Institutes, South Parade, Leeds, by the last day in August in each year.

Candidates for these Scholarships must have been members of some institution in the Union three months previous to the date of their candidature. They may be of either sex, but no teachers or assistant teachers are Candidates must be in circumstances to admissible. require free Scholarships,

The successful candidates will receive free instruction for one year, and will be provided with necessary text books.

#### Clothworkers' Company Scholarships

These Scholarships were founded in 1875 by the Worshipful Company of Clothworkers of the City of London, who offer ten Evening Scholarships, each of the value of  $f_{11}$  10s., tenable in second and third year classes in the Department of Textile Industries.

Each Scholarship is tenable for one year. Students holding Evening Scholarships will be required to attend one of the Advanced Evening Classes in the Department of Textile Industries, and will be expected to present themselves for examination (in the University) by the City

<sup>&</sup>lt;sup>1</sup> Scholarship divided.

### Scholarships

and Guilds of London Technical Institute, in one of the following subjects, viz.: Textile Fabrics—Spinning and Weaving of (a) Wool and Worsted, (b) Cotton, (c) Linen, (d) Silk.

Candidates for Evening Scholarships will be examined in the Processes of Textile Manufacturing and in Elementary Designing.

The next examination will be held on Wednesday, April 24, 1907. Entry forms must be returned to the Registrar not later than April 3, 1907.

### VII. CITY AND COUNTY COUNCIL SCHOLARSHIPS

Scholarships are offered by the Leeds City Council and the County Councils of the North, East, and West Ridings of Yorkshire, tenable at the University of Leeds in common with other institutions, in scientific and technical subjects, including Agriculture. In the West Riding exhibitions are also offered in Coal Mining, and Free Studentships tenable at the University.

For further information apply as follows :----

For Leeds City Council Scholarships : The Secretary, Higher Education Department, Leeds City Education Committee.

For North Riding Scholarships : The Secretary, County Education Offices, Northallerton.

For East Riding Scholarships : The Clerk, East Riding County Council, Beverley.

For West Riding Scholarships and Free Studentships: The Director, Education Department, County Hall, Wake-field.

#### VIII. ASSISTED STUDENTSHIPS FOR TEACHERS.

The Lords of the Committee of Council on Education pay three-fourths of the fees in the following Day classes, and one-half of those in the Evening classes, for a limited number of teachers engaged in science teaching.

Applications for this privilege must be made to the Secretary, Board of Education, South Kensington, not later than August  $\tau$  in each year.

#### I. Day Classes

Chemistry: Any of the lecture courses, not exceeding two in number; laboratory instruction for not less than half a day per week.

Physics: Lectures and laboratory as above.

Electrical Engineering: Lectures and laboratory as above.

Zoology: The lecture courses, Elementary (including practical work), and Advanced.

Botany: The lecture coures, Elementary (including practical work), Advanced, and Agricultural (including practical work).

Biology: Laboratory, not less than one day per week ; course in Nature Knowledge.

Mathematics : Any of the lecture courses, not exceeding two in number.

Agriculture: The lecture courses, first year (including practical work), and second year (including practical work).

Agricultural Chemistry: Any of the lecture courses, not exceeding two in number. Laboratory instruction for not less than half a day per week.

#### II. Evening Classes

*Electrical Engineering*: Any of the lecture coures, not exceeding two in number. Practical class.

For fees and other particulars of above classes see page 227, and following pages.

# IX. FORMER SCHOLARSHIPS, NOW DISCONTINUED

#### Akroyd and Brown Senior Scholarships

Formerly part of the income of the Akroyd and Brown Scholarship funds was applied to the maintenance of Senior Scholarships, awarded after examination to registered students of the University, and tenable in the Faculties of Science and Technology, but the Senate resolved on May 15, 1905, to apply such income to the continuance of Scholarships originally awarded as Entrance Scholarships.

#### Akroyd Senior Scholars

Parkin, Alfred	1887	Hastings, Hugh
Taylor, Arthur	1888	Stoney, William Walter
Wright, Joseph	1889	Ingle, Harry
Speak, Savannah Johnson	1890	Miall, Stephen
Wilks, Stephen Longmore		Mann, Harold Hart
Butterworth	1891	Cobb, John William
Wheelwright, Edwin Whit-	1892	Archdeacon, William Henry
field	1893	Wise, Julian Stanton
Courtice, George Robert		Welpton, William Parker
Aulton		Guthrie, Thomas
	Taylor, Arthur Wright, Joseph Speak, Savannah Johnson Wilks, Stephen Longmore Butterworth Wheelwright, Edwin Whit- field Courtice, George Robert	Taylor, Arthur1888Wright, Joseph1889Speak, Savannah Johnson1890Wilks, Stephen Longmore1891Butterworth1891Wheelwright, Edwin Whit-1892field1893Courtice, George Robert

<u> </u>	0 1	7 3	
Senior	Schol	11VSI	1115

1894	Wilson, Harold Albert	1898	Shepherd, Arthur Burton
	Haworth, Frederic	1899	Hunt, Francis William
1895	Rigby, William		Gawler, Robert
	King, Herbert	1900	Grant, Charles Henry
189 <b>6</b>	Calvert, Harry Thornton		Thompson, John Thomas
	Jowett, Albert	1901	Denton, Ernest
	Tansley, George Edward		Gray, Arthur Lambert
1897	Storr, Bertram Vincent	1902	Raper, Henry Stanley
	Cooper, Albert Henry	1903	Zortman, Israel Hyman
1898	Groocock, Henry Lloyd	1904	Phillipson, Abram

#### Brown Senior Scholars

1880	Ingle, Herbert	1892	Davis, Frederick William
	Passavant, Laura Maude		Daniel
1881	Wilson, Albert Edward		Marsland, Roland
	Armstrong, Wilhelmina	1893	Dawson, Harry Medforth
	Maria		Motley, Parker
1882	Senior, William Otte	1894	Eurich, Hermann Oskar
	Stables, William Herbert	1895	Guthrie, Thomas
1883	Allen, Edgar Johnson		Dalton, John Edwin
5	Ahrons, Ernest Leopold	1897	Broadbent, Francis James
1884	Potter, Arthur Edward	2097	Skirrow, Frederick William
	Schmitz, Herman Emil	1898	Findlay, Mary Grace
1885	Dibb, John Hustwick	1899	Whiteley, Charles Edward
5	Hurtley, William Holdsworth		Chapman, Fitzroy Tozer
1886	Pocklington, Henry Cabourn	1900	Unwin, Ernest Ewart
	Thompson, George Robert	1901	Hummel, Alfred Roland
1887	Duncan, William	1901	Ure
,	Thorp, Walter		Stoddard, Arthur Askwith
1888	Sykes, Ernest	1902	Dell, John Alexander
	Watson, Frank Leslie	1902	Goodson, Ethel Elizabeth
1890	Nicholls, Percy	1000	
1090		1903	Calam, Harold
	Myers, John Ellis		

#### X. PRIZES

#### Gladstone Memorial Prize

The Trustees of the Gladstone Liberal Memorial Fund have established Gladstone Memorial Prizes to be given in books 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  $\pounds 5$  has been offered to and accepted by the Council of the University, and will be awarded under the following conditions:

I. The prize will be awarded for an Essay on some subject connected with History or Political Science or Economics.

### Prizes

2. 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.

3. No student who has once obtained the Prize may compete a second time.

The Essay must be sent in to the Professor of History not later than the end of September.

1902	Savage, Hilda, B.A.	1904	Gill, William Conrad
1903	Davis, William Hathaway,	1905	Butterworth, George
	B.A.		William

#### Leblanc Medal

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, Nicolas 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.

A bronze medal will be awarded to the candidate in the Final examination in the Honours School of Chemistry, who, having been placed in the first or second class, shall be recommended by the Examiners for distinction in Technological Chemistry or Metallurgy.

1891	Ingle, Harry	1898	Skirrow, Frederick William
1892	Mann, Harold Hart	1905	Davies, Arthur Hugh

#### Thorp Prizes in Forensic Medicine and Hygiene

These prizes, amounting altogether in value to the sum of fifteen pounds, were instituted by the late Dr. Disney L. Thorp, one of the original founders of the Leeds School of Medicine, and are awarded at the close of every third term, in accordance with such regulations as may be made from time to time.

115	Have	122510	Medicine	

1900	Gough, William, B.Sc.	1904	Parkinson, Alfred Howard
1901	Cundall, Edward	1905	Shacksnovis, Reuben
1902	Boyle, Alan	1906	Heppenstall, Clement
1903	No award		Hoyle
	In Publ	ic Heal	lth
1900	Radcliffe, Adolphus Harold	1904	No award
1901	Braithwaite, Leonard Ralph	1905	Hamilton, William Douglas
1902	Tomlin, Herbert	1906	No award
1903	Legge, James Huntly		

#### Thorp Prize Essay

A sum of fifteen pounds is offered every three years for an essay or original research on some subject connected with Forensic Medicine or Public Health. The competitors must have attended in the University of Leeds all the courses necessary to qualify for degrees or diplomas in Medicine, and must have received their degree or diploma not more than three years before the competition. The scope and nature of the essay or research may be either physical, chemical, microscopical, physiological, clinical or statistical, but its subject must have received the approval of the Board of the Faculty of Medicine one year before the award is made. The successful essay or paper with the drawings and specimens by which it may be illustrated will become the property of the University. The prize will next be awarded in October, 1907.

#### Hardwick Prize in Clinical Medicine

This prize, of the value of ten pounds, is given annually on a competition which begins on the third Monday in May. 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 Leeds Infirmary; and they must have held or be then holding the office of Clinical Clerk in that Institution.

1900 Willans, Charles Rudolph 1901 Saville, Edwin 1902 Coupland, James Alane 1903 Matthews, Crawfurd Tait 1904Tomlin, Herbert1905Gough, Alfred1906No award

#### McGill Prize in Clinical Surgery

This prize, of the value of ten pounds, is given annually on a competition which takes place in the month of May. Candidates must be students in the School of Medicine of the University of Leeds who have not at the time of the examination entered on their sixth year, and who have held at the Leeds Infirmary the following appointments :—Casualty dresser, out-patient and in-patient dresser, ophthalmic dresser, in-patient and out-patient medical clerk, post-mortem clerk, and gynæcological clerk.

1900 Gough, William

1901 Keeling, Hugh Neville

1902 Coupland, James Alane

1903 Braithwaite, Leonard Ralph

1904 Brierley, Wilfred Edward 1905 Gough, Alfred 1906 No award

### Prizes

#### Scattergood Prize

This prize, instituted in memory of the first Dean of the Medical Department, Yorkshire College, is awarded annually to the most distinguished student in the class of Obstetrics. The value of the prize is five pounds.

1900	Acomb, John		No award
1901	Coates, Richard		Hamilton, William Douglas
		1906	Heppenstall, Clement Hoyle
1903	Smailes, Herbert William		

#### Gold Medal

A Gold Medal of the value of ten pounds, formerly presented by the Treasurer, and since 1901 by the Faculty of the Infirmary, is awarded on the collated results of the prize examinations in the following subjects :—(1) Surgery; (2) Medicine; (3) Pathology; (4) Obstetrics (Scattergood Prize); (5) Forensic Medicine (Thorp Prize); (6) Clinical Medicine (Hardwick Prize); (7) Clinical Surgery (McGill Prize); (8) Gynæcology; (9) Public Health (Thorp Prize); (10) Pharmacology and Therapeutics; (11) Practical Surgery; (12) Ophthalmology; (13) Mental Diseases. To qualify for the Gold Medal the candidate must have attended all his final classes, i.e., must have completed and not have exceeded his fifth year of study, and must present four prizes or their equivalent. Should a student desire to spend an additional year antecedent to the study of the subjects in part ii in preparing for a Science degree, Honours, or the Primary Fellowship of the Royal College of Surgeons of England, such time need not be counted as one of the five years. Of these prizes one must be either the Surgery or the McGill Prize, and another either the Medicine or the Hardwick Prize.

1900	Gough, William, B.Sc.	1904	No award	
1901	Saville, Edwin	1905	Gough, Alfred	
1902	Coupland, James Alane	1906	No award	
1002	No award			

#### Silver Medal

The Junior Medal (Silver) is awarded upon the results of the prize examinations in the following subjects: -(1) Junior Anatomy; (2) Senior Anatomy, (3) Physiology; (4) Practical Physiology (including the experimental portion of part ii); (5) Materia Medica; that is to say, upon the subjects of the second year and the first and second terms of the third year in the "Normal Course." To qualify, the candidate must obtain two prizes or their equivalent.

1899	Coupland, James Alane	1904	No award
1900	Braithwaite, Leonard Ralph	1905	Hamilton, William Douglas
1901	Boyle, Alan	1906	Mitchell, Guy Annesley
	Gough, Alfred		Carter
1903	No award		

#### Class Prizes

Book prizes and Certificates of Honour are given in the various classes in the School of Medicine at the end of each session.

### SCHOLARS AND EXHIBITIONERS, 1906

		Date of Election	
University (Cl	assics)	1906	Butterworth, George Henry, B.A.
	nglish) Iodern	1905	<sup>1</sup> Holmes, Carrie, B.A.
	anguages)	1905	<sup>1</sup> Gunnell, Doris, B.A.
,, ( <i>Ch</i>	hemistry)	1906	Hodsman, Henry James, B.Sc.
(En)	gineering)	1906	Holgate, Edward, B.Sc.
1851 Exhibiti	ion	1904	<sup>1</sup> Raper, Henry Stanley, B.Sc.
		1905	Zortman, Israel Hyman,
			B.Sc.
,, ,,		1906	Armes, Henry Percy, B.Sc.
Salt		1906	Gill, William Conrad
Leighton		1905	Lacy, Arthur
-		1905	Vernon, Edgar
Clothworkers'	Textile	1906	Broadbent, Lees
,,	,,	1906	Cockcroft, Ernest Edward
**		1906	Mills, James
		1906	Sutcliffe, Arthur Livsey
Leeds City C.	ouncil	1904	Crowther, William Edmund
11	,,	1905	<sup>2</sup> Simpkiss, Nellie
		1905	<sup>2</sup> Webster, Herbert William
		1906	Bannister, Albert
Charles Whea		1904	Scholes, Katharine Louise
	,	1905	Frank, Dorothea Ethel
	,		Batchelor, Edith

Scholarship renewed 2 Scholarship divided

Scholars, 1906

			Date of	
William St	I MA MA ONES		Election I QO 5	Hirst, John Crosland
W WWW DI			1905	Dearnley, Charles
Brown	"		-	<sup>1</sup> Hodsman, Henry James
Drown	•••		1903	
2.9			1904	<sup>1</sup> McGill, Ernest Arthur
2.2	•••		1905	Barker, Christopher James
> >			1905	Watson James Arthur
***	•••		1906	Wood, George
Akroyd	•••		1903	<sup>1</sup> Horsfall, Ronald Smith
3.9	•••	***	1904	<sup>1</sup> Davies, Hamilton
22			1904	<sup>1</sup> Sinson, Israel Lewis
22			1905	Jenkins, Gilbert Ramsden
>>			1905	Marshall, Francis
5.5			1905	Riley, Frank
"			1906	Dudley, Harold Ward
23			1906	Hurst, Frank
Emsley			1905	Leslie, May Sybil
,,			1906	Wigglesworth, Frank
Edward B	aines		1906	Marsh, Frank Salton
Tannett-W	alker Bi	ursarv	1904	McGill, Ernest Arthur
Medical			1902	Booth, Sydney Herbert
22			1902	Rawlings, Harry Richardson
			1906	Little, Cuthbert Joseph
"			- )	Harwood
Infirmary			1901	Rawlings, Harry Richardson
39			1902	Pickles, William Norman
"			1906	Fisher, John Barugh
Clothworke	rs' Enen		1906	Appleyard, Fred
		0	1906	Thewlis, Harry
,,	33		1900	North, Charles Clifford
>>	53		1900	Thompson, Fred
,,	"		· · ·	
, ,	**		1906	Peake, Arnold Duncan
3.5	23		1906	Brooke, Ernest Harrison

1 Scholarship renewed.

#### GRADUATES OF THE UNIVERSITY OF LEEDS

(The names of deceased graduates are printed in italics)

### Honorary Graduates

#### Degrees conferred in accordance with Charter II, § 5

#### Doctor of Laws

1904 Lady Frederick Cavendish 1904 The Archbishop of York The Duke of Devonshire The Earl of Harewood Viscount Cross Lord Allerton The Right Honourable Arthur Herbert Dyke Acland Sir Francis Sharp Powell, Bart., M.P. 1906 Sir John Barran, Bart.

1904 Sir Charles Hubert Hastings Parry, Bart.
Sir Alexander Campbell Mackenzie
Sir Charles Villiers Stanford Sir Edward Elgar
Sir William Bousfield
Charles George Milnes Gaskell
Henry Walford Davies
Charles Wood
1906 Lord Wenlock
Sir Owen Roberts

#### Doctor of Letters

1904	Sir Albert Kaye Rollit	1904	Joseph Wright
	Alfred Austin	1906	The Bishop of Ripon
	Andrew Martin Fairbairn		Sir Charles Holroyd

#### Doctor of Science

- 1904 The Earl of Rosse Lord Kelvin Sir Isaac Lowthian Bell, Bart. The Rt. Hon. Sir James Kitson, Bart., M.P. Sir William Henry Broadbent, Bart. Sir Arthur William Rucker Thomas Edward Thorpe Claudius Galen Wheelhouse Jonathan Hutchinson Thomas Pridgin Teale John Hughlings Jackson Louis Compton Miall
- 1904 Tempest Anderson Arthur William Mayo Robson 1906 Edwin Ray Lankester Alfred Grandidier Paul Pelseneer Heinrich Rubens Sir William Henry Perkin Heinrich Caro Albin Haller Carl Theodor Liebermann Carl Alexander von Martius Thomas Clifford Allbutt Herbert Hall Turner

### Master of Arts 1906 Thomas Percy Sykes

## Graduates

### Degrees conferred in accordance with Charter II, § I

### Master of Arts

1905	Chapman, Maude (Briggs)	1905	Savage, Hilda
1906	Davis, William Hathaway	1906	White, Ethel
1906	McKeand, Maggie Woodrow		Wilson, Florence
1905	Robinson, Ethel Margaret	1905	Wilson, George William

### Bachelor of Arts

1906	Armstrong, Lilias Eveline	1906	Lidbetter, James Staples
1906		1905	Maccoby, Sarah Judith
1906	Bartle, Ida	1906	Martin, Alice Walford
1906	Bibby, Edward Ernest	1906	Matthews, Felix Hackett
1905	Blackburn, Elizabeth Maria	1906	Mitchell, Margaret
1906	Boardman, Ernest Edmund	1906	Maud, Ida Marian
1905	Brigham, Fanny Muriel	1906	Molland, Theodora Mary
1906	<sup>1</sup> Butterworth, George William	1905	Mountain, Eliza
1906	Chapman, Harry Garfield	1905	Naylor, Nellie Noble
1905	Conyers, Hilda	1905	Neville, Ethel May
1906	Darycott, Ernest Jenkinson	1906	Nicholson, Ethel
1906	Daykin, John Bertram, B.Sc.,	1906	Perfect, Douglas
	Vict.	1906	Rider, Martha Hannah
1905	Dickinson, Frederick Walter	1905	Robinson, Lilian Dorothea
1906	Dixon, Elizabeth	1905	Rogers, Hannah
1905	<sup>2</sup> Edwards, Maud Mary	1906	Rogers, Violetta
1905	Foggitt, Emma	1905	Sheard, Dora
1905	Frank, Sarah	1906	Smith, Egerton
1906	Gale, Florence	1906	Spencer, Frances Mary Elvira
1905	Gascoigne, Evelyn May	1906	TenBruggenkate, George
1905	<sup>3</sup> Gunnell, Doris		Herbert
1906	Hand, William Thomas	1906	Townsend, Florence Emma
1906	Hastings, Margaret	1905	Turner, Harriet Marie
1905	Hitcham, Charlotte Elsie	1905	Wallace, Harry Bruce
1905	<sup>3</sup> Holmes, Carrie	1906	Warnes, Sarah Catherine
1906	Illingworth, Maria Emma	1905	Watson, George Alston
1906	Jackson, Mabel	1906	White, Arthur Ernest
1906	Jackman, Elizabeth	1906	Whitehead, Mary
1905	Jowett, Jessie	1906	Wilson, Florence Grey

### Bachelor of Laws

1905 Lee, Edmund

1 University Scholar, 1906.

<sup>2</sup> University Scholar, 1905.

<sup>3</sup> University Scholar, 1905, 1906.

#### Doctor of Science

- 1905 <sup>1</sup>Dwerryhouse, Arthur Richard 1905 Ingle, Harry 1905 Frankland, John Naylor 1905 Mann, Harold Hart

#### Master of Science

1906	Brayshay, Maurice William	1905 <sup>2</sup> Raper, Henry Stanley
1905	Calvert, Harry Thornton	1906 Slater, John Henry
1905	Denison, Robert Beckett	1905 Thompson, John Thomas
1905	Hammerton, Jonas	1906 <sup>3</sup> Unwin, Ernest Ewart

	Dachelor	01 50	ience
1905	Allen, Lilian	1906	Lister, Mary Florence Grace
1905	*Armes, Henry Percy	1905	Lord, William Ernest
1905	<sup>5</sup> Bennett, Hugh Garner	1905	<sup>8</sup> McCandlish, Douglas
1905	Booth, Meyrick	1905	McCrae, Mary Walbrand
1906	<sup>6</sup> Carlton, George Westerdale		(Bruce)
1906	Claridge, Margaret Elsie	1905	Mellor, Fred
1906	Cooper, John George	1905	Morrison, James Alexander
1905	Craig, David		Shepherd
1906	Crosland, Percy Field	1906	Myers, Mary Alice
1905	Davies, Arthur Hugh	1906	Outram, Nora Aline Jane
1905	Davies, Ivor Parry	1905	Owen, Samuel Joseph
1905	Denbigh, George James	1906	Pearce, Cyril Thomas
1906	Draper, Alick Darby	1905	Phillipson, Abram
1906	Dudley, Nora	1906	Procter, Herbert
1906	Elliott, Bertram Warren	1906	Richardson, John Stocks
1906	Ellis, John Newman	1906	Ross, William Oatey
1906	Field, Margaret	1906	Smailes, Alan
1905	Goddard, Clara Annie	1905	Standing, Edwin Mortimer
1905	<sup>4</sup> Gregory, Frederick Maurice	1906	Thorp, George
1906	Hansell, John Bentley	1905	Tiffany, Frank
1905	Harding, Oswald Jackson	1906	Tomlinson, Thomas Fowler
1905	Hilary, Daisy	1906	Townsend, Robert
1906	<sup>7</sup> Hodsman, Henry James	1905	Turner, Florence Mary
1906	<sup>7</sup> Holgate, Edward		Beatrice
1906	Horsfall, Ronald Smith	1905	Wagstaffe, George William
1905	Hutton, Wilfred	1906	Ward, Margaret Naomi
1906	Jordan, Albert	1906	Warin, Phillipson
1906	King, Charles Arthur	1905	Whitehead, Pollie
	Destan	C M.J	tataa

#### Doctor of Medicine

1906	Anderson,	William	Jenkins	1905	Parkinson,	Arthur	Stanley
	Webb						

- 1 Assistant Lecturer in Geology, University of Leeds.
- 2 Principal of the Pupil Teachers' Centre, Batley.

<sup>3</sup> Junior Demonstrator in Biology, University of Leeds.

<sup>4</sup> University Scholar, 1905.

<sup>5</sup> Research Assistant in Leather Industries, University of Leeds.

<sup>6</sup> Assistant Demonstrator in Physics, University of Leeds.

<sup>7</sup> University Scholar, 1906.

<sup>8</sup> Laboratory Demonstrator in Leather Industries, University of Leeds.

### Bachelor of Medicine and Bachelor of Surgery

1905	Bailey, Fred	1906	Kendall, Frank Edward
1906	Crawford, James Stirling	1905	Lister, Thomas Edmund
1905	Dixon, Robert Garside	1906	Radcliffe, Roland Brooke
1906	Dobson, Francis George	1905	Smith, Charles Nixon
1905	Fearnley, Harold	1905	Todd, Aldred Bertram
1906	Flint, Ethelbert Rest		Slingsby
1906	Gloyne, Stephen Roodhouse	1906	Walker, Albert Latimer
1905	Gough, Alfred	1905	Walker, Melville George
1906	Hummel, John James, M.Sc.		Leslie
1905	Hustler, George Herbert	1905	Whalley, Frederick

### Degrees conferred in accordance with Charter II, § 2

(Unless otherwise stated, the first degree was taken in Victoria University, or, if in 1904, in the Victoria University of Manchester.)

### Bachelor of Arts

		Degree 1 other versity			Date of Degree in other University
1905	Atkinson, Janet	1904	1906	Linforth, Edith M:	ary
1905	Bishop, Sarah Ellen	1896		Elizabeth	1904
1905	Burley, Leo Le Gay	1897	1905	Mitchell, Myra	1904
1905	Chard, Edith Annie	1897	1905	Owen, Florence	1903
1905	Denby, Maurice	1904	1905	Raven, Hilda Mary	1904
1905	Elliott, Spencer Hayward	1904	1906	Scruton, Kate Ellen	1904
1905	Gray, Catherine Isabella	1904	1905	Skinner, Mabel	1904
1905	Hepworth, Frank	1904	1905	<sup>1</sup> Waterhouse, Osborn	1904
1905	Holgate, Jane	1904	1905	Wilson, Selina Ethel	1904
1905	Howarth, Fred	1896	1905	Wood, Jessie Graham	1903
1905	Kitchener, Ernest Edward	1904			

#### Bachelor of Laws

			· · · · ·		
1905 1905	Robson, William Newby Sykes, James	1903 1902	1906	Wade, James Mervyn	1903
	M	aster d	of Scien	nce	
1906	Beeley, Arthur	1901	1905	Gawler, Robert	1903
1905	Fry, George Cecil	1901	1905	King, Herbert	1901
	Ba	chelor	of Scie	ence	
1906	Anson, Emily	1904	1905	Bulman, John Arthur	1904
1906	Armes, Jane Prue	1902	1905	Calam, Harold	1904
1905	Barlow, Percival Smith	1897	1905	Crosfill, John	1901
1905	Barton, Edith Beatrice	1904	1906	Crowther, Herbert	1900
1905	Boyd, Simeon	1903	1905	Dudley, James, B.Sc., I	20nd.1904
1905	Brier, Albert	1902	1905	Ellis, James John	1903
1905	Broadhead, James Arthur	1904	1905	Forsyth, Christina Bra	nd 1900

1 University Fellow, 1905.

		1 other			f Degree in other
		versity			niversity
1905	Gaut, Robert Charles	1904	1 1905	Scouller, Walter Daly	1899
1905	Gomersall, Ernest Edward	1904	1905	Stead, Frank Cawthron	1903
1905	Gunter, John Henry	1901	1905	Stewart, Tom	1904
1905	Hardy, Joseph	1904	1905	Thorp, Samuel	1903
1905	Hartley, Percival	1903	1905	Waite, Joseph Harold	1904
1905	Hunter, Herbert	1903	1905	Walker, Joshua	1904
1905	Hutchinson, Florrie	1903	1905	White, Robert George	1904
1905	Johnson, John William		1905	Whittaker, Croyden	
	Haigh	1896		Meredith	1899
1905	Kay, Douglas John	1904	1905	Wilson, Frances Annie	1904
1905	Marshall, Joseph	1904	1905	Wood, Margaret, B.Sc.,	
1905	Murphy, Harold Newton	1903		Lond.	1900
1905	Scholefield, Fred	1903	1 1905	Zortman, Israel Hyman	1904

	· ·	Date of Degree in other
		University
1905	Birtwhistle, Frederick Percy Hewetson	1904
1905	Boyle, Alan	1904
1905	Braithwaite, Leonard Ralph	1903
1905	Brierley, Wilfred Edward	1904
1905	Brown, Henry	1901
1905	Cundall, Edward	1904
1905	Deane, Arthur Maslen	1904
1905	Greaves, Frederick William Marshall	1904
1905	Greenwood, Charles Henry	1899
1905	Greenwood, Henry Harold, M.B., Lond.	1904
1905	Greenwood, William Osborne, M.B., Lond.	1903
1905	Hayes, Frederick William	1904
1905	Ladell, Robert George Macdonald	1902
1905	Macvean, Herbert James	1904
1905	Maffin, Harry	1903
1905	Matthews, Crawfurd Tait	1903
1905	Morton, Armitage	1899
1905	Reed, John Arthur	1899
1905	Smailes, William Herbert, M.B., B.S., Lond.	1905
1905	Stansfield, Harry	1898
1905	Stott, William Atkinson	1901
1905	Suggit, Bertram	1904
1905	Tomlin, Herbert	
- 0	Willans, Charles Rudolph	1904
1905	willians, Charles Kuduiph	1900

Bachelor of Medicine and Bachelor of Surgery

Degrees conferred in accordance with Charter II, § 3

Master of Arts	Date of Associateship
1905 Hodgson, Charles Edward, M.A., Vict.	1900
1905 <sup>1</sup> Melville, Ellen Louisa, M.A., Vict.	1900
1905 Scholes, Thomas Wilfrid, M.A., Vict.	1899
1906 Stables, William Herbert, M.A., Vict.	1891

1 Assistant Mistress of Method, University of Leeds.

Bachelor of Arts	Date of Associateship
1906 Anderson, John, B.A., Vict.	1897
1905 Armitage, John Henry, B.A., Lond.	1891
1905 Barras, Elsie Clara, B.A., Vict.	1903
1906 Bradley, Florence Margaret, B.A., Vict.	1902
1905 <sup>1</sup> Braithwaite, William Dalston, B.A., Lond.	1895
1905 Burgess, Lillie, B.A., Vict.	1902
1905 Dalton, John Edwin, B.A., Lond.	1898
1905 Dobson, Constance, B.A., Vict.	1899
1905 Easterfield, Thomas Hill, B.A., Cantab.	1888
1905 Fairbrother, Jessie, B.A., Vict.	1903
1905 Fox, Arthur Cunliffe, B.A., Lond.	1891
1905 Garside, Bertha, B.A., Vict.	1902
1905 Gray, Arabella Hyde Janet Ethel, B.A., Vict.	1901
1905 Hepworth, Minnie, B.A., Vict.	1902
1905 Hield, Esther Margaret, B.A., Vict.	1899
1905 Hirst, Miriam, B.A., Lond.	1903
1905 Holmes, Ethel, B.A., Vict.	1902
1905 Hurst, Thomas Ockerby, B.A., Vict.	1892
1905 Lister, Martha, B.A., Vict.	1899
1905 North, Fanny Caroline, B.A., Vict.	1902
1905 Parnaby, Margaret Ellen (Hudson), B.A., Vict.	1901
1905 Porritt, Florence Mary, B.A., Vict.	1899
1905 Precious, Julia Hopper, B.A., Vict.	1900
1905 Ridge, William Sheldon, B.A., Vict.	1898
1905 Scruton, Harriett Annie, B.A., Vict.	1903
1905 Sheard, Mary Beatrice, B.A., Vict.	1899
1905 Walker, Ada, B.A., Vict.	1900
1905 Walker, Julia Beatrice, B.A., Vict.	1902
1905 Wrigley, Isaac, B.A., Lond.	1886
Doctor of Science.	
1905 <sup>2</sup> Varley, William Mansergh, D.Sc., Vict.	1898
Master of Science	
1905 Agar, Herbert William, M.Sc., Vict.	1899
1905 Andrews, William Allen, M.Sc., Vict.	1901
1906 <sup>3</sup> <sup>4</sup> Barker, Aldred Farrer	1893
1905 <sup>5</sup> Beaumont, Roberts	15
1905 Bevan-Lewis, William	
1906 <sup>3</sup> <sup>7</sup> Bothamley, Charles Herbert	1892
1905 Briggs, Samuel Henry Clifford, M.Sc., Vict.	1900
1905 <sup>s</sup> Brown, Walter Henry	
<sup>1</sup> Headmaster of Ulster Provincial School, Lisburn.	

1 Headmaster of Ulster Provincial School, Lisburn.

2 Assistant Professor of Physics, Heriot Watt College, Edinburgh.

3 Associate honoris causa.

4 Head of Textile Department, Technical College, Bradford.

5 Professor of Textile Industries, University of Leeds.

6 Lecturer on Mental Diseases, University of Leeds.

7 Organising Secretary to the Education Committee of the County of Somerset,

8 Clinical Lecturer in Surgery, University of Leeds.

Master of Science	Date of Associateship
1906 Chapman, Thomas William, M.Sc., Vict.	1898
1905 Cooper, Albert Henry, M.Sc., Vict.	1897
1905 Copley, Frederick, M.Sc., Vict.	1901
1906 Coulson, Alfred, M.Sc., Vict.	1900
1905 Dent, Frankland, M.Sc., Vict.	1897
1905 Edwards, Ernest John, M.Sc., Vict.	1902
1905 Findlay, Mary Grace, M.Sc., Vict.	1900
1906 <sup>1</sup> <sup>2</sup> Gardner, Walter Myers	1895
1905 <sup>3</sup> Goodman, John	
1905 Grant, Charles Henry, M.Sc., Vict.	1901
1905 *Green, Arthur George	
1905 Hefford, Charles Nelson, M.Sc., Vict.	1896
1905 Hummel, John James, M.Sc., Vict.	1901
1905 Jackson, Harry Percival, M.Sc., Vict.	1898
1905 <sup>5</sup> Jowett, Albert, M.Sc., Vict.	1901
1905 <sup>6</sup> Kendall, Percy Fry	
1905 Kirby, Frederick Öscar, M.Sc., Vict.	1905
1905 <sup>7</sup> Littlewood, Harry	
1905 Motley, Parker, M.Sc., Vict.	1895
1905 Norminton, Harold, M.Sc., Vict.	1900
1905 <sup>s</sup> Parr, George Dudley Aspinall	
1905 <sup>°</sup> Procter, Henry Richardson	1
1905 Skirrow, Frederick William, M.Sc., Vict.	1897
1905 <sup>1</sup> Walker, Henry Secker	
1905 <sup>11</sup> Whiteley, Charles Edward, M.Sc., Vict.	1901
1905 <sup>12</sup> Wright, Charles James	

### Bachelor of Science

1905 Ackroyd	, John Prest, B.Sc., Lond.	1901
1905 Appleya	rd, John Henry Ross, B.Sc., Vict.	1898
	William, M.A., Cantab.	1893
	Charles Edward, M.Sc., Vict.	1896
	y, William, B Sc., Vict.	1899
1905 Brook, I	Harry, B.Sc., Vict.	1902

1 Associate honoris causa.

2 Head of Chemistry Department, Technical College, Bradford.

3 Professor of Engineering, University of Leeds.

4 Professor of Dyeing and Tinctorial Chemistry, University of Leeds.

5 Principal of the Central Pupil Teachers' Classes, Bury.

6 Professor of Geology, University of Leeds.

7 Professor of Surgery, University of Leeds.

8 Lecturer on Electrical Engineering, University of Leeds.

9 Professor of Applied Chemistry (Chemistry of Leather Manufacture), University of Leeds.

10 Lecturer on Ophthalmology and Otology, University of Leeds.

11 Late Fellow of Victoria University; Assistant Lecturer and Demonstrator in Chemistry, University of Leeds.

23

12 Professor of Obstetrics, University of Leeds.

13 Headmaster of Normanton Grammar School,

Date of Associateship Burgess, William Ernest, B.Sc., Vict. Cobb, John William, B.Sc., Lond. Coxon, Lawrence Adams, B.Sc., Vict. Crawshaw, Annie, B.Sc., Vict. Cunningham, Jean Orme, B.Sc., Vict. <sup>1</sup>Dawson, Harry Medforth Dickinson, Cyril, B.Sc., Vict. Everett, James Herbert, B.Sc., Vict. Fearnley, Lewis William Knapton, B.Sc., Vict. Finn, Cornelius Philip, B.Sc., Vict. Grant, Frederick Ernest, B.Sc., Vict. Greenwood, Arthur, B.Sc., Vict. Haler, Percy James, B.Sc., Vict. Hampshire, Florence Elizabeth, B.Sc., Lond. 1905 <sup>2</sup>Hefford, George Winfield, B.Sc., Vict. Heptinstall, Richard, B.Sc., Vict. Hield, Mary Elsie, B.Sc., Vict. Hirst, Henry Reginald, B.Sc. Vict. Hobart, John William, B.Sc., Vict. Hobley, Robert Arthur, B.Sc., Vict. Hummel, Alfred Roland Ure, B.Sc., Vict. 1905 Hunt, Francis William, B.Sc., Vict. 1905 <sup>3</sup>Hurtley, William Holdsworth, B.Sc., Lond. 1905 \*Ingle, Herbert Jackson, Arthur, B.Sc., Vict. Kaye, Edward Percy, B.Sc., Vict. Knowles, George William, M.A., Royal Univ., Irel. Langstaff, Bilton, B.Sc., Vict. Livesey, Charles Edwin Leonard, B.Sc., Vict. Lodge, Harry Livingston, B.Sc., Vict. 1905 <sup>5</sup>Lowson, William, B.Sc., Lond. Manasseh, Antonius Joseph Marriner, William Wright Marsden, Ernest Vane, B.Sc., Vict. 1905 6 Marshall, Herbert, B.Sc., Vict. Morris, Florence Annie, B.Sc., Vict. Morton, Dora, B.Sc., Vict. Moss, Charles Edward, B.Sc., Vict. Nicholls, Percy, B.Sc., Vict. Oddy, Annie Maude, B.Sc., Vict. Peacock, Arthur, B.Sc., Vict. 1905 7 Pocklington, Henry Cabourn, B.A., Cantab., D.Sc., Lond. 1892 Rankin, William Munn, B.Sc., Lond. Rayner, Herbert Emmett, B.Sc., Vict. 

1 Lecturer in Physical Chemistry, University of Leeds.

2 Science Master to the Staffordshire County Council.

3 Lecturer in Chemistry, St. Bartholomew's Hospital.

4 Agricultural Chemist to the Transvaal Government.

5 Assistant Lecturer and Demonstrator in Chemistry, University of Leeds,

6 University Fellow, 1905.

7 Fellow of St. John's College, Cambridge,

302	Graauates	
	I A69	Date of ociateship
1906	Rydall, George Herbert, B.Sc., Vict.	1903
1906	Schmitz, Herman Emil	1886
1905	Scruton, Harold Adams, B.Sc., Lond.	1903
1905	Shacksnovis, Reuben	1898
	<sup>1</sup> Shorter, Sydney Alfred, B.Sc., Vict.	1900
1905	Skirrow, Benjamin Beck, B.A., Oxon.	1886
1905	Smith, Henry Archbold	1900
1905	Sowerbutts, Edith Utley, B.Sc., Vict. Stocks, Arthur, B.Sc., Vict.	1901
1905 1905	Studley, Charles Wilcock, B.Sc., Vict.	1900 1898
1905	Taylor, Francis, B.Sc., Vict.	1902
1905	<sup>2</sup> Thompson, George Robert	1889
1905	Thompson, Hubert, B.Sc., Vict.	1903
1905	Thorp, Walter, B.Sc., Lond.	1892
1905	Tiffany, Joseph Edgar, B.Sc., Vict.	1899
1905	Walbank, Wilfrid Stephen, B.Sc., Vict.	1897
1905	Warmington, Edith, B.Sc., Vict.	1903
1905	Whaley, James, B.Sc., Vict.	1895
1905	White, William Henry, B.Sc., Vict.	1895
1905	Wise, Julian Stanton	1893
	Doctor of Medicine	
1905	Stoney, William Walter, M.D., Vict.	1895
1903	Turton, Edward, M.D., Vict.	1898
	Bachelor of Medicine and Bachelor of Surgery	
1905	Broadley, John, M.B., Lond.	1898
1905	Darlow, Francis, M.B., Ch.B., Vict.	1897
1905	Eames, Charles William, M.B., Ch.B., Edin.	1896
1905	Hopton, Ralph, M.D., B.S., Lond.	1896
1905	Kellett, Alfred Featherstone, M.B., Cantab.	1891
1905	Legge, James Huntly, M.B., Lond.	1901
1905	Mackenzie, Alexander, M.A., M.B., B.C., Cantab.	1898
1905	Manknell, Arthur, M.B., Lond.	1893
1905	Moorhouse, Charles Herbert, M.B., Ch.B., Vict.	1897
1905	Seaton, Douglas, M.B., Ch.B., Vict.	1895
1905	Spink, Ernest William, M.D., Lond.	1895
1906	Trumper, Oscar Bagster, M.B., Ch.B., Vict.	1895
1905	Wells, George Lee, M.B., B.S., Lond.	1888
1905	Wilks, Stephen Longmore Butterworth, M. D., B.S., Lond Williamson, Joshua, M.B., Ch.B., Vict.	
1906	winnamson, Joshua, M.D., On.D., Vict.	1898
	DIPLOMAS (UNIVERSITY OF LEEDS)	

### Education

1905	Barton, Edith Beatrice, B.Sc.
1906	Convers, Hilda, B.A.
-	Edwards, Maud Mary, B.A.
	Owen, Florence, B.A.
	Robinson, Lilian Dorothea, B.A.

Assistant Demonstrator in Physics, University of Leeds,
 Professor of Mining, University of Leeds,

#### Diplomas—Certificates

#### Commerce

1904 Whiting, John Roland 1906 Potts, Roland Beeton

#### Mechanical Engineering

1905 Wharton, John

#### **Electrical Engineering**

- 1904 Foulds, John Rhodes Chippindale, Isaac Murray 1905 Hamilton, James
- 1906 Richardson, Thomas Brook

#### Coal Mining

1904 Frazer, Edgar Hamilton Paterson, George Stewart Willey, Edward

#### Dyeing

1906 Sen, Gopal Chandra

#### Leather Manufacture

1904 Casaburi, Vittorio Doikawa, Saichiro Prevôt, Jules Mathieu 1906 Feldheim, Herman Dietrich Ernst Mende, Stephan

### Certificates of Proficiency (Yorkshire College)

#### Engineering

1887	Marriner, William Wright	1897	Child, Francis (m, e)
	( <i>m</i> )	1898	Broadbent, Francis Jan
	Parkin, Frederick William		(c, m)
	(c, m)		Day, George James (m)
1890	Sykes, Ernest $(c, m)$	1898	Wales, William Arthur
1891	Nicholls, Percy $(c, m)$	1901	Chapman, Fitzroy Toze
	Watson, Frank Leslie $(c, m)$		McBretney, Walter (e)
1893	Marsland, Roland (m)		Wood, William Wellesle
1894	Firth, Harold William (e)	1902	Pearson, Robert John A
	Tillotson, Fred (e)		son(e)
1895	Eurich, Herman Oskar (m,	1903	Ingleby, Henry Stock
	e)		(e)
	c Certificate in Cir m Certificate in Me	vil Engine	eering.
	m Certificate in Me	chanical	Engineering.

e Certificate in Electrical Engineering.

### **Textile Industries**

1894 Sawyer, Edgar

1896 Barker, Alfred Edward

mes

(m)

r (e) y(e)

- ddi-
- dale

### Dyeing

1888	Booth, Robert Davis
	Briggs, Harold Midwood
1892	Sunderland, Arthur
1893	Carruthers, Walter Scott
1894	Cope, Frank
1895	Pate, Lewis

Leather Industries and Chemistry

1900 Alan Guthrie

### Leather Manufacture

1900	Holmes, Harold Edwin	1904	Brown, W
-	Broadhead, William Edward		Chadwick,
1902	Borghstijn, Adrianus		Foulds, Ge
	Jacobus		Speeden, V
	Greatrex, Gilbert		

allace , Jesse eorge Croft William Knowles

#### Agriculture

1896 Popple, Lawrence 1897 Cowling, Ralph

1898 Hinchcliff, Joseph Henry

### UNIVERSITY OF LEEDS FELLOWS, SCHOLARS, AND PRIZEMEN

(See pages 347-372.)

### VICTORIA UNIVERSITY FELLOWS, SCHOLARS, AND PRIZEMEN (YORKSHIRE COLLEGE STUDENTS)

#### University Fellowships

1899	Stuart, Wilson	Arts
1900	Stuart, Wilson	Arts
1901	Whiteley, Charles Edward	Science

#### University Scholarships

Stuart, Wilson	Philosophy
Cooper, Albert Henry	Physics
Dwerryhouse, Arthur Richard	Geology
Varley, William Mansergh	Physics
Braithwaite, Leonard Ralph	Medicine
Denison, Robert Beckett	Chemistry
Stelfox, Sydney Herbert	Engineering
Stoddard, Arthur Askwith	Engineering
Raper, Henry Stanley	Chemistry
Waterhouse, Osborn	English
Zortman, Israel Hyman	Physics
	Cooper, Albert Henry Dwerryhouse, Arthur Richard Varley, William Mansergh Braithwaite, Leonard Ralph Denison, Robert Beckett Stelfox, Sydney Herbert Stoddard, Arthur Askwith Raper, Henry Stanley Waterhouse, Osborn

1 Victoria University of Manchester.

- 1898 Pilgrim, Julius Aldred Wood, Percival John 1899 Newbury, Frederick George 1900 Horsfall, Louis Hubert
  - Wilkinson, Edward John

#### Derby Scholarship

1899 Frankland, John Naylor

#### John Bright Scholarship

- 1897 Stuart, Wilson
- 1899 Hartley, Harold (prizeman)

1906 <sup>1</sup>Waterhouse, Osborn

#### Mercer Scholarship

1901 Dakin, Henry Drysdale

#### Leblanc Prize

1891 Ingle, Harry 1892 Mann, Harold Hart

1898 Skirrow, Frederick William

### UNIVERSITY OF LEEDS HONOURS SCHOOLS

#### Classics

1906	Class I	Bibby, Edward Ernest
-	,,	Butterworth, George William
	Class 2	Ashburner, Frederick
	,,	Matthews, Felix Hackett
	,,	TenBruggenkate, George Herbert
	,,	

#### English Language and Literature

1905 Class I Gascoigne, Evelyn May Holmes, Carrie Class 2 Conyers, Hilda

#### Modern Languages and Literatures

1905	Class I	Edwards, Maud Mary
	22	Gunnell, Doris
1906	Class 2	Hastings, Margaret
	,,	Illingworth, Maria Emma
	Class 3	Whitehead, Mary

#### History

1906 Class 2 Wilson, Florence Grey

#### Mathematics

1905 Class 2 Phillipson, Abram

#### Physics

1905 Class I Mellor, Fred

1 Victoria University of Manchester.

Honours Schools

#### Chemistry

1905	Class	I	Armes, Henry Percy
	.,		Bennett, Hugh Garner
			Davies, Arthur Hugh
	Class	2	Crosland, Percy Field
	Class	3	Booth, Meyrick
	.,	-	McCandlish, Douglas
			Morrison, James Alexander Shepherd
1906	Class	I	Hodsman, Henry James
	Class	2	Horsfall, Ronald Smith
	,,		King, Charles Arthur
			Botany

1905 Class 2 Turner, Florence Mary Beatrice

### Physiology

1905 Class I Lord, William Ernest

### Geology

1906 Class I Jordan, Albert

### Engineering

1905	Class I	Gregory, Frederick Maurice
-	Class 3	Owen, Samuel Joseph
1906	Class I	Holgate, Edward
-	12	Richardson, John Stocks

### VICTORIA UNIVERSITY HONOURS SCHOOLS (YORKSHIRE COLLEGE STUDENTS)

### History

Cla 1900 Cla 1904 <sup>1</sup> Cla	uss 2 uss 2	Davis, William Hathaway
Eng	glish	Language and Literature
19041 Cla	ss I	Waterhouse, Osborn
Cla	iss 2	Denby, Maurice
,,	,	Elliott, Spencer Hayward
	,	Hepworth, Frank
Mod	lern	Languages and Literatures
1902 Cla	ss 2	Robinson, Ethel Margaret
2	,	Stevenson, Ethel Mary
1903 Cla	ss 2	Mann, William Edward Wormald
1904 <sup>1</sup> Cla		Airey, Millicent
Cla	iss 2	Dodgson, Sarah Alice
Cla	ess 3	Raven, Hilda Mary

1 Victoria University of Manchester.

### Philosophy

### Mathematics

		Frankland, John Naylor
1900	Class 2	Findlay, Mary Grace

### Physics

1897	Class 2	Hammerton, Jonas
1899	Class I	Cooper, Albert Henry
	,,	Varley, William Mansergh
1900	Class I	Shorter, Sydney Alfred
1901	Class 1	Grant, Charles Henry
	Class 2	Copley, Frederick
	Class 3	Andrews, William Allen
1902	Class 2	Denton, Ernest
		Oates, James Holroyd
	Class 3	Goodson, Ethel Elizabeth
1903	Class 2	Thorp, Samuel
19041	Class I	Phillipson, Abram

### Chemistry

1891	Class I	Ingle, Harry
1892	Class I	Mann, Harold Hart
1893	Class I	Dent, Frankland
20	Class 3	Archdeacon, William Henry
1895	Class 2	Fry, George Cecil
15	,,	Guthrie, Thomas
	Class 3	Hirst, Henry Reginald
	,,	King, Herbert
1896	Class I	Sugden, John Henry
	Class 2	Brittain, Charles Edward
	,,	King, Arthur
	Class 3	Watson, Herbert Wood
1897	Class I	Wilson, Harold Albert
1091	Class 2	Harrison, William Hudson
1898	Class I	Skirrow, Frederick William
1090	Class 2	Calvert, Harry Thornton
		Storr, Bertram Vincent
1800	Class o	
1899	Class 2	Dobson, William Henry Noël
1900	Class I	Denison, Robert Beckett
	Class 2	Shepherd, Arthur Burton
1901	Class I	Dakin, Henry Drysdale
		Whiteley, Charles Edward
	Class 2	Gawler, Robert
1902	Class I	Briggs, Samuel Henry Clifford
	,,	Grant, Frederick Ernest
	,,	Taylor, Francis

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Honours Schools

1902	Class 2 Class 3	Gaunt, Rufus Norminton, Harold Redfern, Herbert Stanley Thompson, John Thomas Coxon, Lawrence Adams
1903	Class J Class I	Raper, Henry Stanley
1903		Scholefield, Fred
	Class 2	Ellis, James John
	Class 3	Rhodes, Edwin
1904 <sup>1</sup>	Class I	Gatecliff, John
	**	Hartley, Percival
		Marshall, Joseph
		Zortman, İsrael Hyman
	Class 2	Calam, Harold
	**	Chadwick, Percival Wager
		Radcliffe, Norman Brooke
	Class 3	Barton, Edith Beatrice

### Geology

1898	Class	I	Jowett, Albert
1899	Class	I I	Dwerryhouse, Arthur Richard

### Zoology

1901	Class I	Standing, Herbert Fox
	Class 2	Dell, John Alexander

### Physiology

1897	Class 2	Forsyth, John Andrew Cairns	
		Hummel, John James	

### Engineering

1891	Class I	Nicholls, Percy
1893	Class 2	Davis, Frederick William Daniel
1896	Class 2	Hefford, Charles Nelson
1897	Class 2	Oddy, James
	22	Tansley, George Edward
1898	Class 2	Corrie, William Edward
-	Class 3	Priestman, Harold
1899	Class I	Linskill, William Arthur
	Class 2	Groocock, Henry Lloyd
	Class 3	Hutton, William Austin
1900	Class I	Mann, Ernest Edward
1901	Class 2	Ballardie, George de Caynoth
	> >	Pearson, Robert John Addison
1902	Class I	Stelfox, Sydney Herbert
	.,	Stoddard, Arthur Askwith
		Wetherall, Arthur

<sup>1</sup> Victoria University of Manchester.

### Honours Schools

1902 Class Class 1903 Class ,,	3 Kirby, Frederick Oscar						
Honours a	t M.B. and Ch.B. Examinations						
1894 Class							
1895 Class Class	2 Shaw, John Vincent						
0 c a!"	Trotter, Robert Hale						
1896 Class							
1897 Class	Moorhouse, Charles Herbert						
	Taylor, Frank Edward						
1898 Class							
Class							
	Turton, Edward						
1899 Class							
.,	Illingworth, William Arthur						
33	Morton, Armitage						
1901 Class							
1903 Class	I Braithwaite, Leonard Ralph						
Class	2 Steele, Percy Kingsley						
1904 Class							
33	Tomlin, Herbert						
First Class	ses at Final LL.B. Examination						

#### Examination First lasses at Final

1902 Sykes, James 1903 Jessop, Frederick Hubert

### UNIVERSITY OF LEEDS EXAMINATION LISTS

(September, 1905-July, 1906)

### Faculty of Arts (including Commerce and Law)

### Examinations for B.A. Degree with Honours

Classics	-	 Class I.	Bibby, Edward Ernest
		**	Butterworth, George William
		Class 2.	Ashburner, Frederick
		22	Matthews, Felix Hackett
			TenBruggenkate, George Herbert
Modern Languages	and		
Literature		 Class 2.	Hastings, Margaret
		,,	Illingworth, Maria Emma
		Class 3.	Whitehead, Mary
History -	•		Wilson, Florence Grey

#### M.A. Examination

Greek and Latin -	-	-	-	- Hand, William Thomas
Latin and French -	-	-	-	- Frank, Sarah
English and French	-	-	-	- White, Ethel
History	-	-	-	- Fisher, Frederick Broughton
				Naylor, Nellie Noble
				Neville, Ethel May
				Wilson, Florence

#### Ordinary B.A. Final Examination

#### Div. I.

Chapman, Harry Garfield Daykin, John Bertram, B.Sc. Jackman, Elizabeth Lea, George William Martin, Alice Walford Maud, Ida Marian Molland, Theodora Mary Townsend, Florence Emma

Div. 2. Armstrong, Lilias Eveline Bartle, Ida Boardman, Ernest Edmund Darycott, Ernest Jenkinson Dixon, Elizabeth Gale, Florence Jackson, Mabel Lidbetter, James Staples Mitchell, Margaret Nicholson, Ethel Perfect, Douglas Rider, Martha Hannah Rogers, Violetta Spencer, Frances Mary Elvira Warnes, Sarah Catherine White, Arthur Ernest

#### B.A. Intermediate Examination

September, 1905 (Old Regulations)

Dixon, Elizabeth Foster, Janet Kendall, Evelyne Southern, Alfred Collingwood Storey-Bates, William Edward Weatherell, Thomas Bertram

#### June, 1906 (Old Regulations)

Langstaff, Bilton, B.Sc. Perkins, Sarah Elizabeth Poynton, Lucy Ellen Prest, Adeline Blanche

#### June, 1906 (New Regulations)

Abrahams, Solomon Charlesworth, Alice Cowling, Alice Beatrice Frank, Dorothea Ethel Golding, Mary Muriel Hardman, Bessie Hobson, Elsie Irene Hogan, Kathleen Lee, Catherine Lock, John Pearson, Eunice Simpkiss, Nellie Strange, Edward Howard Winter, John Edgar

#### LL.B. Final Examination

Div. 2. McConnell, John William Scott, Hubert Edward

#### LL.B. Intermediate Examination

Div. 2. Brayshay, Stanley, B.A., Gundill, Edward Norman Cantab. Maude, Arthur Percy Lees

#### Diploma in Education

Conyers, Hilda, B.A. Edwards, Maud Mary, B.A. Owen, Florence, B.A. Robinson, Lilian Dorothea, B.A.

#### Diploma in Commerce

Potts, Roland Beeton

### Faculties of Science and Technology

#### Doctor of Science

Frankland, John Naylor

#### Examinations for B.Sc. Degree with Honours

Chemistry	-	-	•	Class 2.	Hodsman, Henry James Horsfall, Ronald Smith
Geology -			-		King, Charles Arthur Jordan, Albert
Engineering	+			- Class 1.	Holgate, Edward
0				3 7	Richardson, John Stocks

#### M.Sc. Examination

Physics -	-	-			- Thorp, George
Zoology -	-	-		-	- Unwin, Ernest Ewart

#### Ordinary B.Sc. Final Examination

#### Div. I.

#### Div. 2.

Carlton, George Westerdale Draper, Alick Darby Dudley, Nora Ellis, John Newman Pearce, Cyril Thomas Tomlinson, Thomas Fowler Townsend, Robert Claridge, Margaret Elsie Cooper, John George Elliott, Bertram Warren Field, Margaret Hansell, John Bentley Lister, Mary Florence Grace Myers, Mary Alice Outram, Nora Aline Jane Procter, Herbert Ross, William Oatey Ward, Margaret Naomi Warin, Phillipson

#### **B.Sc.** Intermediate Examination

Asquith, George Baddiley, James Bibby, Joseph Richard Draper, Alick Darby Horn, Florence

September, 1905 (Old Regulations) Kitson, Nellie Rhodes, Norman chard Sinson, Israel Lewis Irby Smith, Harlan Vernon, Edgar

June, 1906 (Old Regulations)

Davies, Henry Fletcher, Alfred Edgar Horn, Fred

Smith, Joseph Alfred Tomlinson, John Arthur Wilkinson, Edward

#### June, 1906 (New Regulations)

Armitage, Harry Bailey, Annie Rosa Barker, Christopher James Blockey, John Reginald Burras, Catherine Dixon, <sup>1</sup><sup>2</sup> Frank Metcalfe Fottrell, Edward Joseph Gilchrist, David Goddard, Ethel Mary Haworth, Richard Hinckley, Arthur Leslie, May Sybil Mann, James William

Marshall, Francis Normington, May Platts,<sup>1</sup> Matthew George Smart, William Thornton, Edwin Tunnicliffe, Eveline Mary Vince,<sup>1</sup> Eva Mary Watts, Frank Maxfield Webster, Herbert William West, William Ernest Whitaker, Herbert Zelensky, Lily Aurelia

#### Diplomas

Electrical Engineering	r _		-	Richardson, Thomas Brook
Dyeing -			-	Sen, Gopal Chandra
Leather Manufacture	-	-	-	Feldheim, Herman Dietrich Erns
				Mende, Stephan

### Faculty of Medicine

#### Doctor of Medicine

Anderson, William Jenkins Webb

#### Final M.B. and Ch.B. Examination

March, 1906

#### Part II

Crawford, James Stirling Radcliffe, Roland Brooke Walker, Albert Latimer

July, 1906

#### Part II

Dobson, Francis George Flint, Ethelbert Rest Gloyne, Stephen Roodhouse Hummel, John James, M.Sc. Kendall, Frank Edward

1 Without essay.

Part I

Part 1

No candidates

Dibb, William Land

2 As Honours candidate only.

#### Second M.B. and Ch.B. Examination

March, 1906

Part I

Part II No candidates

Flint, Horace Lance Frobisher, James Hebblethwaite Martin Hepworth, Sidney Milverton Mitchell, Guy Annesley Carter Nicol, George Colin Henderson Vallow, Harold

#### July, 1906

Butler, William Harold Keswick, John Barton Thompson Brown, Charles Suffield Musson, John Percy Riley, Arthur Sharpe, Claudius Galen Kaye Shaw, William Smith, Reginald Eccles Thoseby, John Norman Lonsdale

#### First M.B. and Ch.B. Examination

September, 1905

#### Part I.

Musson, John Percy Sharpe, Claudius Galen Kaye

#### Part II.

Brown, Charles Suffield Raper, Henry Stanley, M.Sc. Sharpe, Claudius Galen Kaye

#### June, 1906

Brown, John Perrin Fairclough, Richard Dawson Fisher, John Barugh Lamb, Harold Victor Mitton, Norman Vernon Slocombe, Bernard Atkinson Stockdale, George Vincent Twist, Norman Stuart Ward, Rowland Brown, John Perrin Fisher, John Barugh Hart, Walter Sidney Ingham, Harold Norman Lamb, Harold Victor Mitton, Norman Vernon Musson, John Percy Nunneley, Francis William Slocombe, Bernard Atkinson Stockdale, George Vincent Twist, Norman Stuart Ward, Rowland

### REGISTERED STUDENTS

#### Session 1905-6

(The names of deceased Students are printed in italics)

## Faculties of Arts (including Commerce and Law), Science and Technology

Abbott, Claude Abbott, Robert Eastoe Abrahams, Solomon Addison, Frank Alexander, Victor William Ament, Robert Anderson, Harold Anderton, Louisa Andrew, Walter Tom Appleby, Edgar Ingham Appleyard, Fred Appleyard, John Armes, Henry Percy, B.Sc., Brown Scholar Armitage, Rose Emma Armitage, Samuel Reginald Cecil Armitage, Sarah Armstrong, Lilias Eveline Arrowsmith, Elsie Ashburner, Frederick Ashby, William Ewart Asquith, George Atkinson, John Roland

Baddiley, James Bailey, Alfred Ernest Bailey, Annie Rosa Baines, Mrs. Herbert Baines, Gilbert Balden, John Whiteley Baldwin, Ewart Vernon Banister, Norman Gaukroger Barber, Cyril Barker, Christopher James, Brown Scholar Barker, Irene Barnes, Augustus Marsden Barran, Rowland Noel Barron, William Cecil Bartle, Ida

Bartolazzi, Giovanni Batley, Richard Clarkson Battle, Alfred Ernest Bauer, Noah Bayley, John Henry Stewart Bayly, Harold Goodenough Beakbane, Henry Bearder, Ernest Arthur Beaumont, John Beecroft Beckwith, Kathleen Marie Bedford, George Smith Bentley, Hannah Grimshaw Bentley, Zia Best, Gladys Edith Bevan, Gilbert John Beckford Bewlay, Thomas Henry Bibby, Edward Ernest Bibby, Joseph Richard Bilbrough, Edward Percival Binns, Charles Henry Birkhead, Florence Ethel Bishop, Sarah Ellen, B.A. Blackburn, Harry Fowler Blackburn, James Arthur Blackburn, Robert Blake, Edith Annie Blakeman, Thomas William Blamires, Charles Stephen Blockey, John Reginald Bloxam, Beryl Ursula Christian Bloxam, William Popplewell, B.Sc. Blyth, James Rupert Boardman, Ernest Edmund Boldison, Alice Booth, Harold Gordon Boult, Richard William Walter Bowes, George Robert Bracewell, Geoffrey Alfred Bradley, Jim, Clothworkers' Textile Scholar

Bramley, Beatrice Bramley, Dorothy Bramley, John Robinson Clarkson Branson, Frederick Hartridge Bray, Edwin Brayshay, Stanley, B.A. Brayshay, Walter Balden Breeze, Monica Gabrielle Mary Brigg, Gerald Francis Broadbent, Lees, Clothworkers' Textile Scholar Brook, Annie, Emsley Scholar Brook, Fred Brooke, John Stainburn Brown, Charles Brown, Constance Mabel Brown, Emily Maud Brown, John Perrin Brown, William Bethel Brumfitt, Clifford Burgess, John Henry Burley, Edith Burras, Catherine Burrows, Joseph Thomas Butterworth, George William Cameron, James Nield Carlton, George Westerdale, L. C. C. Free Student, and Leighton Scholar Carpenter, Victor Charles Douglas Boyd Carrington, Ethel Carter, William Edgar Chalker, Henry Cecil Chapman, Hannah Mabel Chapman, Harry Garfield Charlesworth, Alice Cheadle, Hugh Wentworth Cheavin, Harold Squire Chisholm, Catherine Claridge, Margaret Elsie Clarke, Francis Eagle Clay, Harold Foster Clayton, Reginald Fitzroy Clegg, Alfred Cockcroft, Ernest Edward Cohen, Alexander Cole, George Albert Convers, Hilda, B.A. Conyers, James Reeve Cooper, Arthur Leslie

Cooper, John George Corner, Daisy Cowling, Alice Beatrice Cragg, Wilfrid Balderstone Cramp, Ellis Crawshaw, William Cridland, Dorothy Croft, Alice Mary Crosby, Tom Croskell, Austin Cyril Crosland, Percy Field, B.Sc., Brown and Dyeing Scholar Cross, William Ernest, L.C.C. Free Student Crowther, Herbert Crowther, Jane Elizabeth Crowther, Philip Townsend Crowther, William Edmund, L. C. C. Scholar Croysdale, James Curtis, Kenneth Samuel Cuthbertson, Frances Maud May Daiches, Salom Dale, Charles Herbert Darycott, Ernest Jenkinson David, Peter Davies, Arthur Hugh, B.Sc. Davies, Hamilton, Akroyd Scholar Davies, Henry Davies, William Mason Davis, Jefferd Osborn Dawson, Herbert Dawson, Walter Daykin, John Bertram, B.Sc., L.C.C. Free Student Delafort, Jeanne Delano, Rede Leonard Denby, Maurice, B.A. Denham, Edwin Denton, Wilfred Desurmont, Jules Marie Joseph Dickinson, George Senior Dixon, Elizabeth Dobson, Lionel Donaldson, Laurence Richard Leverton Doria, Victorino Planas Draper, Alick Darby Drury, James Duckett, Harriett Dudley, Nora

Durand, Louis Durrant, Aubrey Percy Durrant, William Dwyer, Maurice

Eagar, George Fraser Fitzgerald Eames, Herbert Ebbage, Edith Mabel Edwards, Maud Mary, B.A. Elgey, James Elliott, Bertram Warren Elliott, Thomas Ellis, Claude Douglas Ellis, Claude Douglas Ellis, George Frederick Ellis, John Newman Ellis, Leonard Eric Kensett Evans, Edwin Everett, Percy Newton Everett, Percy Newton

Fairley, Barker Farnish, John Fawkes, Valentine Hawksworth Francis Feather, Alice Feather, Samson Featherstone, Marflitt Feldheim, Herman Dietrich Ernst Feldheim, Maxime Field, Margaret Fielding, Arthur Edward Bruce Findlay, John Findlay, Sarah Kennedy, L.C.C. Free Student Fisher, John Barugh Fleming, John Fletcher, Alfred Edgar Flint, Frederic Samuel Flynn, Bridie Foggitt, Emma, B.A. Foord, James Maurice Foord, Lawrence Barnard Fort, Morris Fottrell, Edward Joseph Foulds, Frank Oswald Foulds, Thomas Fox, Thomas Alfred Frank, Dorothea Ethel, Charles Wheatley Scholar Frank, George Herbert Frank, Sarah, B.A.

Gale, Florence Gana, Vicenti Garner, John Henry Garnett, Brian James Henry Gaunt, Thomas Henry Geenty, Francis Gibbon, Alexander Horace Gibson, B. Gibson, John Maughan Gibson, William Ainsworth Gilchrist, David Gill, William Conrad Gilliat, Harold Goddard, Edith Eleanor Goddard, Ethel Mary Golding, Mary Muriel Goldsbrough, Emma Jane Gomez, Hector Goodall, Eric William Aldrich Goodson, Arthur Godfrey Gordon, Stephen Jefferson Gould, Sarah Graham, John Luther Gray, Catherine Isabella, B.A. Greaves, Samuel Sowray Greener, Kenneth Woodfal Greenhalgh, John Greening, Edward Baptist Greenwood, Margaret Hannah Gundill, Edward Norman Guthrie, Alan

Haigh, Arthur Haldane, Norman Henry Haley, Mary Beatrice Hall, Herbert Cecil Victor Hammond, Mabel Marguerita Hampson, William Robert, junr., Mus. Bac. Hand, William Thomas Hannigan, Annie Hansell, John Bentley Hanson, Charles Edward Hardie, Alexander Greenhorn Hardisty, Victoria Lavinia Hardman, Bessie Hardman, Thomas Victor Hardy, Frank Hare, Herbert Hargraves, Henry James Hargreaves, Edith, Edward Baines Scholar

Harrington, William Francis Harris, John William Harris, Marks Solomon Harrison, Edward Harrison, Herbert Spencer Harrison, Mary Emma Lewis Harrop, Arthur Hart, Harry Leatham, Clothworkers' Textile Scholar Hart, Walter Sidney Harvey, Helen Grace Harvey, Margaret Hastings, Margaret Haworth, Richard Healey, Gilbert Bedford Healey, William Heap, Samuel Varley Henderson, Clara Henderson, Matthew Henton, Meanwell Hepton, Charles Herzog, Isaac Hicks, John Sykes Hilary, Henry Oxtoby Hill, James Howard Hinchliffe, Cecil Hinchliffe, Charles Henry Hinchliffe, Robert Hinckley, Arthur Hine, Frank Hine, Noel Austin Wade Hirst, John Crosland, William Summers Scholar Hitchcock, Charles Guy Hobson, Charles Henry Hobson, Elsie Irene Hockney, Rosetta Hodges, Raymond John Hodgson, Gordon Alexander Hodgson, Herbert Hodsman, Henry James, Brown Scholar Hogan, Kathleen Holdroyd, Frank Victor Holgate, Edward Holloway, Harold Pierce Holmes, Carrie, B.A., University Scholar Horn, Florence Horn, Fred Horne, Arnold Cecil Horrocks, Wilfred

Horsfall, Jessy Eveline Horsfall, Ronald Smith, Akroyd Scholar Howden, Edward Howe, Grace Alice Hudson, Edwin Hudson, Henry Humble, John Proudfoot Humble, William Franklin Hummel, Raymund Hertzog Hummel, Alfred Roland Ure, B.Sc. Hutchings, Arthur William Hutchinson, George Hanley Hutchinson, Teasdale Hilton Illingworth, Albert Edward Illingworth, Maria Emma, L.C.C. Free Student Ingham, Harold Norman Ingleby, Ernest James Jackman, Elizabeth Jackson, Colin Gyrth Jackson, Jessie Hyman Jackson, Mabel Jamieson, James Jarvis, Albert Jenkins, Gilbert Ramsden, Akroyd Scholar **Iervis**, Thomas Francis Jewell, Arthur North Jewell, Richard Fisher Halifax Johnson, Albert Morgan Johnson, Mary Whiteley Jones, Grace Jones, Walter Evan Jordan, Albert Iowett, Constance Edith Iowett, Jessie, B.A. Kantor, Alexander Kemp, Cecil Herbert Kendall, Evelyne Kerr, George Francis Kershaw, James Leonard Kershaw, Sara Lizzie Killen, Thomas Bradley

Kinder, Fred King, Charles Arthur

King, Florence Mary

King, Percival Edgar, Dyeing Scholar King, William Henry Kitchen, John Edward Kitchin, Malcolm Jack Kitson, Nellie Kitson, Roland Dudley Klein, Harris, L. C. C. Scholar Knowles, Henry Shervington Knowles, Mary Jane

Lacy, Arthur Lamb, Harold Victor Lambert, John Murray Lamont, Ellen Mary (Mrs.) Langrick, Benjamin Langstaff, Bilton, B.Sc. Lavington, Mabel Jessie Law, Marion Rosalind Lax, Albert Harold Lea, George William Leadley, Edith Emma Lee, Catherine Lee, Harry Lancelot Leslie, May Sybil Lidbetter, James Staples Linforth, Edith Mary Elizabeth, B.A. Little, Janet Elizabeth Lister, Mary Florence Grace Lloyd-Jones, Norman Lock, John Lockwood, Charles Henry Lombardet, Charles Marie Joseph Longfield, Stephen Loyd, Jessie

Machin, William Arthur Macnaughton, Arthur William Maddison, Wilfred Guy, Leighton Scholar Mallalieu, Cloudesley Mallinson, Dorothy Mann, Arthur Mann, James William Manning, Paul Marchant, Benjamin William Marchant, Ernest Norman Marley, Wilfrid Marr, Henry Norrison Marshall, Francis, Akroyd Scholar Marshall, Isabella Dorothea Martin, Alice Walford Matthews, Felix Hackett

Maud, Ida Marian Maude, Arthur Percy Lees McAdoo, Dorah McConnell, John William McGill, Ernest Arthur, Brown Scholar Mende, Stephan Midglev, Mary Blanche Wearmouth Midgley, Wilson Mills, James, Clothworkers' Textile Scholar Milnes, Orlando Barlow Mitchell, Margaret Mitton, Norman Vernon Molland, Theodora Mary Moncayo, Rafael Morrison, James Alexander Shepherd, B.Sc. Morton, Rebecca Moulden, John William Mudd, Betsy Jane Mulcahy, Julia Müller-Albert, Franz Hermann Mullins, John Murgatroyd, Tom Murphy, Bertha Mary Murphy, Grace Louisa Myers, Mary Alice Myers, William Ewart

Naylor, Alice Maud Naylor, George Naylor, Nellie Noble, B.A. Naylor, Paul Nelson, Isobel Mary Nevsome, John Nicholson, Ethel Noble, Edward Normington, May North, Edith North, Fanny Caroline, B.A. Nunneley, Francis William

Oldroyd, William Leonard Orchardson, Ian Quiller Otter, Jennie Outram, Edith May Outram, Nora Aline Jane Ovens, Thomas Stanley Owen, Florence, B.A.

Page, Alfred James Palin, Gwynedd Marion Pape, Leonard Stanley Parker, Victor Barnett Parkin, Edwin Parry, Pierce Pattinson, John Lynn Pawson, Harry Peacock, Elsie Peacock, Oswald Raper Peake, Christopher Bosher Pearce, Cyril Thomas Pearson, Claudius Arthur Pearson, Eunice Peck, Hubert Blackburn Penty, George Victor Penty, Percy Walter Perfect, Douglas Perkins, George Perkins, Sarah Elizabeth Peters, John Cecil Phillips, Harold More Phillipson, Abram, B.Sc., Akroyd Scholar Pickard, Kate, B.A. Pickles, Eliza Platts, Matthew George Platts, Walter Leslie Plews, Mary G. Pollock, Charles Albert Potts, Harry Hampson Potts, Roland Beeton Poustie, Jessie Poynton, Lucy Ellen Prest, Adeline Blanche Pridham, Charles Albert Priestley, James Arthur Prince, Ben Procter, Herbert Procter, Herbert Granville Pullan, Charles Pullan, Clara Pulleyn, James Pullon, John William

Raistrick, John William Randolph, Charles Edward Raper, Robert Struthers Rawlins, Percy James Reason, Sydney Redfern, Ethel Margaret Rhodes, Eleanor Rhodes, John Henry Rhodes, John Wilfrid Rhodes, Norman Richardson, Alexander Cameron Richardson, John Stocks Richardson, Thomas Brook Rickaby, John Scoffield Riddett, Norman Lock Rider, Martha Hannah Rider, Maud Mary, B.Sc. Riley, Frank, Akroyd Scholar Rippon, Elsie Roberts, Edward Ellis Robertson, Harry Cecil Robinson, Ethel Jane Robinson, Ewart Robinson, Lilian Dorothea, B.A. Roe, Lillian Rogers, Violetta Rollisson, Edgar Ross, Walter Alexander Ross, William Oatey Rossi, Franco Routledge, Norman Wilkinson Rowbotham, Henry Robinson Rowe, Claude Hamerton Rudkin, Thomas Sidney Rusby, James Arthur Rushworth, Edgar

Sanderson, William Edward Saunders, Hugh Stanley Saville, Granville Sawdon, Gertude Scales, Middleton Scholes, Katharine Louise, Charles Wheatley Scholar Schumann, Hans Max Scott, Frederick Heslop Scott, Harold Martin Scott, Hubert Edward Scott, Percy Scott, Percy Melville, B.A. (Rev. Scruton, Kate Ellen, B.A. Sen, Atul Chandra Sen, Gopal Chandra, M.A. Shackleton, Henry Shannon, George Stracyman Shaw, William Sheard, Charles Holdrid Sheard, Percy Sheard, Sarah

#### Registered Students

Shearman, Thomas Sheehan, Patrick Joseph Shepherd, Phyllis Shepherd, William Shuttleworth, Newton Sia, Waiching Simpkiss, Nellie, L.C.C. Scholar Simpson, Charles Howden Simpson, Thomas Gilroy Singleton, Walter Sinson, Israel Lewis, Akroyd Scholar Slater, Arthur Dickinson Smailes, Alan Smart, William Smith, Bracewell Smith, Egerton Smith, Elizabeth Smith, Gerald Flood Smith, Harlan Smith, Joseph Alfred Smithells, Frederic Enfield Snow, Elizabeth Snowden, Henry Frederick Snowdon, Percy Soar, George Southern, Alfred Collingwood Spencer, Frances Mary Elvira Stanford, Guy Desmond Stephens, Frank George Coad Stephenson, Mabel Stewart, William Stockdale, George Vincent Stocks, Frank Rubie Stoker, Joseph Storer, George Eric Storey-Bates, William Edward Strainge, Henry William Stubley, John Reginald Sutcliffe, Arthur Sutcliffe, Arthur Livsey Sutcliffe, James Sutcliffe, John Algernon Lacy Sutcliffe, John William Sykes, Albert Howarth Sykes, Alfred Sykes, Bernal Sykes, Norman Walker Sykes, William, Junior Symington, John Alexander Talbot, John Wilfrid Taylor, Ernest

Taylor, Florence Taylor, Frances Maude Taylor, Friend Taylor, Joseph Hamer Taylor, Robert Taylor, Robert Charles Teale, Christopher Carlill TenBruggenkate, George Herbert Thomas, Sydney Hardisty Thompson, Alfred Thompson, Arthur Thorburn, Walter Hunter Thornton, Edwin Thornton, Gilbert Dare Thornton, Oscar Robert Thorp, George, Leighton Scholar Thorp, Hilda, B.A. Tiffany, Frank, B.Sc. Tomlinson, John Arthur Tomlinson, Thomas Fowler Toothill, Joseph Townend, Sydney Townsend, Florence Emma Townsend, Fred Townsend, Robert Treacy, Kathleen Tunnicliffe, Eveline Mary Turner, Frederick William Turner, James Turner, Joseph William Twidale, John Henry Twist, Norman Stuart

Vernon, Edgar Vicari, Ferdinand, Ph.D. Viccajee, Sohrab Franger Vince, Eva Mary

Waite, Joseph Harold, B.Sc. Wakeford, Ethel Evans Walbank, Edward Walker, Arthur Leonard Walker, Douglas Walker, Emily Farrington Walker, Ernest Smith Walker, Francis Henry Walker, Hugh Gordon Walker, Jessie Walker, Joseph Noel Gelson, B.A. Walker, Joseph Noel Walker, Leonard

Walker, Samuel, B.Sc. Walker, Thomas Lockwood Walker, Wilfred Thomas Wallbank, Fred Milligan Walsh, John Lister Ward, Clifford Ward, Edmund Sykes Ward, Margaret Naomi Wardle, Ernest James Warin, Phillipson Warner, Christopher Brooks Warnes, Sarah Catherine Warren, Frederick Wartnaby, William Thomas Wade Waterson, William Horace Waterworth, George Waterworth, James William Watmuff, Reginald Jonas Watson, James Scholar Arthur, Brown Watts, Frank Maxfield Weatherell, Thomas Bertram Webster, Herbert William, L.C.C. Scholar Weddall, Frank Weidel, Albertine West, William Ernest Wheatley, Robert Whimpenny, John Whitaker, Gilbert Whitaker, Herbert White, Arthur Ernest White, Ethel, B.A. White, Frederick White, Herbert White, Leonard Tinsdale White, Leslie Gordon White, Tom M'Call White, William Henry, B.Sc. Whitehead, Claude Maguire Whitehead, John Walton Whitehead, Mary

Whitton, Helen Grace Wilkinson, Edward Wilkinson, Edward William Wilkinson, Eltoft Wray Wilkinson, Frederick Allen Bathurst Willbourn, Horace Haynes Williams, James Henry Willis, Lousia Mary Wilson, Charles Leonard Wilson, Ella Beaumont Wilson, Florence Grey Wilson, Forsyth James, Ph.D. Wilson, Francis Cecil Wilson, George Victor Wilson, Helen Katherine Wilson, Henry Leslie Wilson, Laurance Naylor Wilson, Reginald Kingsdale Wilson, William Hodgson Sugden Windle, Harold Edmund Winstanley, Bernard Wood, Arthur Edward Wood, Bertram William Francis Wood, Charles Bertram Wood, Isa Dora Wood, John Wood, Sydney Herbert Woodhead, Arthur Edmund Woodhead, John Ezra Woodhead, John William Woodhead, Walter Edward Woodward, Nellie Wordsworth, Thomas, junr. Wray, George Frederic Wright, Francis Whitworth, B.A. Wright, Horace Wright, Philip Arton

Yeats, Thomas Flasby

Zelensky, Lily Aurelia

#### School of Medicine

Alderson, William Seaforth Almond, George Henry Anderson, Alexander

Bain, William, M.D. Barrett, Walter Ernest Battle, Harold Edward Bernstein, Isaac Barnett Berry, A. H. Bibby, James Paley Blackwood, Bertie Booth,<sup>1</sup> Sydney Herbert

1 Medical Scholar,

Boyd, Catherine Laura, M.B., B.C., L.R.U.I. Bradshaw, Lionel Wilson Braithwaite, Edward Wrigley Brearley, Joseph Brown, Charles Suffield Burnell-Jones, Harold Stanley Butler, William Harold

Cattley, Robert, B.Sc., M.B. Close, John Basil Coates, William Robert Addison Cross, George Harold

Dibb, William Land Dixon, John Dobson, Donald Frederick Dobson, Francis George Dobson, Margaret Bernard Dobson, Maurice Rowland Dunbar, Dean

Edmondson,<sup>1</sup> Watts Elliott, William Harold Arthur Ellis, Edward Douglas

Fairclough, James Butler Farrer, Robert Noel Flint, Ethelbert Rest Flint, Horace Lance Fothergill, Arthur Frobisher, James Hebblethwaite Martin

Gabriel, William Mabson, L. R.C. P., L. R.C. S., Edin. Gaffikin, Prudence Elizabeth, L. R.C. P., L. R.C. S., Edin. Gamble, Albert Gaunt Gloyne, Stephen Roodhouse Goode, Henry Norman, M. B. Gostwyck, Cecil Hubert, M. B., Ch. B. Grange, Charles D'Oyly Greenwood, George Frederick Grundy, George Christopher Hackworth, Vivian Cuthbert Halliwell, Thomas Oates, M. R.C. S., L. R.C. P. Hamerton, Albert Ernest, M.R.C.S., L.R.C.P., Lond. *Hamilton,*<sup>1</sup> Wiltiam Douglas
Hansell, Alan Waites
Hardy, Digby Wrangham
Harly, Harry Simpson
Harvey, Reginald Simpson
Heppenstall, Clement Hoyle
Hepworth, Sydney Milverton
Hessel, William Thomas
Hill, Philip Keith
Hilrst, Benjamin Hattersley
Holroyde, Gerald
Hooton, William Henry
Howden, Ernest
Hummel, John James, M.Sc.

Ibbotson, Henry Roscoe

Johnson, John William Haigh

Kendall, Frank Edward Kenny, Maurice Aloysius Keswick, John Barton Thompson Knowles, Charles Haley

Land, John Murgatroyd Ling, Harold Charles, M.R.C.S., Eng. Lister, Thomas Edmund, M.B., Ch.B. Lyth, John Christopher

Mackenzie, Alexander, M. B., B.C. McKane, Rudolph John Watford McKane, William Oliphant Middlemiss, <sup>1</sup> <sup>2</sup> James Ernest Miller, Archibald William Cameron Miller, John Edward Mitchell, Guy Annesley Carter Montgomery, Raymond Musson, John Percy

Nicol, George Colin Henderson North, Donald North, Herbert

Oakley, Philip Douglas O'Connell, Arthur Patrick Oglesby, Frederick Loveday

1 Medical Scholar.

<sup>2</sup> Infirmary Scholar.

Pegler, <sup>2</sup> William Vernon Percival, Thomas Godfrey Perlman, Archie Pickles, Clifford Crawshaw Pickles, Philip Dobson Pickles, <sup>2</sup>William Norman Piercy, Bernard Charles Pinder, William Padgett

Radcliffe, Percy Alexander Hurst, M.B., Ch.B. Rawlings, <sup>1 2</sup> Harry Richardson Ray, Matthew Burrow, M.D. Reader, Norbert Leo Maxwell Reed, Ernest William Renton, Harold Ferdinand Rhodes, Arthur Richardson, Alfred Richardson, Gerald Sidney Richardson, Gerald Sidney Riley, Arthur Roxburgh, Andrew Lindsay, M.B., Ch.B.

Scargill, Harold Brooke Scargill, Henry Edwin Schilling, Joseph Ludwig Scott, William Graham Sedgwick, George Henry Sergeant, John Owen Shacksnovis, Reuben, B.Sc. Sharp, Claudius Galen Kaye Shaw, William Shaw-Stewart, Wm. (Rev.) B.A. Smith, Reginald Eccles Stanger, Harry Steele, Percy Kingsley, M.B., Ch.B. Stockwell, George Ephraim St. Clair. M.B., B.C. Sutcliffe, Edward

Tattersfield, Frederick Taylor, John Edgar Thornton, Francis John Thoseby, <sup>1</sup> John Norman Lonsdale Turner, Arthur Henry

Vallow, Harold Veale, Rawdon Augustus, B.A. Vickers, Benjamin Randall

Waddington, Eric Frushard Wales, Harry Walker, Albert Latimer Walker, George Lister Walker, John Philip Ward, Rowland Watson, William Webster, Hugh, L.R.C.P., L.R.C.S., Edin. Whitehead, Thomas Williamson, William Sugden Wilson, John Black Ferguson

# Number of Students

The following table shows the number of Students of different classes who attended the University of Leeds during the last two Sessions :---

Registered Students :					1904-5.	1905-6.
In Department of				***	146	143
In Department of	Arts, I	law,	Science	and		
Technology .					687	730
Occasional Students in	do. d	lo	***		7	3
Evening Students in	do. d	lo			486	285 285
					1,326	1,161
						-

<sup>1</sup> Medical Scholar. <sup>2</sup> Infirmary Scholar.

# UNIVERSITY SOCIETIES, 1906-7

The sanction of the Senate is required to the Rules and Regulations of any new Society which it is proposed to establish.

The University Union. The University Union comprises the Cricket, Football (Rugby and Association), and Tennis Clubs, and undertakes the management of the Gymnasium, the Fives Court, and the Debating Society. The Union has also the management of the University Athletic Ground, and undertakes the arrangement of the Athletic Sports, the Conversazione, and other entertainments.

The governing body of the Union consist of a President, three Vice-Presidents, a representative of the Staff, the Hon. Treasurer, and a Committee of twenty-three students elected annually.

The subscription to the Union is 105.6d. annually. It is payable to the Registrar of the University at the beginning of the session, with the class fees, and is compulsory on each registered student attending for more than six hours per week, with certain exceptions.

Membership of the Union carries with it membership of the various athletic clubs under its control, membership of the Debating Society, and the right of using the Common Rooms and the Gymnasium.

Handbooks, containing all information concerning the Union, its Rules, Officers, Athletic Clubs, and also the various Societies, are issued *gratis* to all members of the Union. They may be had on application to the Hon. Secretary or the Hall Porter.

Further information may be obtained from the Hon. Secretary of the Union.

President—The Most Hon. the Marquis of Ripon, Chancellor. Vice-Presidents—A. G. Lupton, Esq., Pro-Chancellor; N. Bodington, M.A., Litt. D., Vice-Chancellor; A. S. Grünbaum, M.D., Dean of the Faculty of Medicine. Chairman of Committee—A. E. Battle. Hon. Secretary—L. R. L. Donaldson. Hon. Treasurer-Professor Connal. Staff Representative—Professor Vaughan. Committee—J. Baddiley, J. R. Bibby, C. H. Binns, J. N. Cameron, A. G. Goodson, R. S. Horsfall, G. V. Penty, J. A. Smith, F. G. Stephens, F. M. Watts, E. W. Wilkinson, and representatives of the School of Medicine. The Women's Representative Committee. This Committee is annually elected by the Women Students. It has control of the Women's Common Rooms and appoints representatives on the University Union Committee and sub-committees.

President-Miss E. Claridge. Secretary-Miss J. Walker, Committee-Miss C. Brown, Miss C. Burras, Miss J. Jowett, Miss B. Prest, Miss M. Stephenson, Miss E. Tunnicliffe.

The Debating Society. This Society meets on alternate Mondays in the first and second terms.

President—Professor Clapham. Vice-President—W. H. Perkins. Secretary—E. W. Wilkinson. Committee—R. Ward, W. E. Storey-Bates, W. C. Gill

The Literary and Historical Society. This Society meets at 5 p.m. on alternate Mondays during the first and second terms for the reading of papers and discussions on literary and historical subjects. The annual subscription is 4s.

President—Professor Roberts. Vice-Presidents—Miss J. Jowett and W. C. Gill. Secretaries—Miss B. Murphy and W. E. Storey-Bates. Committee—Miss J. Walker, Miss G. Murphy, B. Weatherell, R. Hodges, B. Fairley.

The Scientific Society. The object of this Society is to develop and maintain interest in the progress of Science by affording opportunities of intercourse between students of the University. The meetings are held during the first and second terms. Members take teat together at 5 p.m., after which papers are read and discussions take place. Any present or past student of the University is eligible for membership. The subscription for Ordinary members is 4s.; for Life members,  $\pounds I$  Is. During the third term excursions are made to neighbouring chemical works, dyehouses, &c.

President—Dr. H. M. Dawson. Vice-Presidents—Dr. C. Crowther, Hamilton Davies. Hon. Treasurer—H. J. Hodsman, B.Sc. Hon. Secretary—C. A. King, B.Sc. Committee—Miss Outram, C. H. Binns, G. H. Frank, A. G. Hardie.

The Biological Society. Members of the University Staff, who are interested in any branch of Natural History, and students past and present, who have completed a course of Elementary Biology, are invited to join. The meetings are conversational, and no lectures or papers are given. Members are invited to bring interesting natural objects for exhibition. Subscription, Is. a year. Meetings are usually held at 5 p.m. on the first Friday in the month, except when this falls in a University vacation. The officers of the Society are a President and Secretary, the latter of whom also acts as Treasurer.

President—Professor Miall. Secretary and Treasurer—E. E. Unwin, M.Sc.

The Education Society. This Society holds two meetings in each of the first and second terms for the discussion of educational subjects. The following speakers have been invited to address the Society during the session 1906-7: The Vice-Chancellor, Professor Miall, Mrs. Marvin, Miss Simpson and Dr. Forsyth.

President—W. P. Welpton, B.Sc. Vice-President—Miss H. Robertson, B.A.. Hon. Secretary—F. W. Turner. Committee—Miss Prest, Miss Ebbage, A. Hinckley, A. Lacy.

The Engineering Society. This Society has for its object the discussion of subjects bearing upon Engineering and Applied Sciences, the visiting of works and other places of engineering interest, and the promotion of a friendly intercourse amongst its members. It consists of Ordinary, Associate, and Honorary Members and Associates. Any past or present day or evening student of the University is eligible for ordinary membership. Any person not eligible for ordinary membership, but who shall have been actively engaged in engineering for a period of not less than five years, or who shall have passed through an engineering training at any University or University College, is eligible as an Associate Member. Any person may be elected an Honorary Member. Any person is eligible as an Associate who is recommended by the Committee as a fit and proper person. Members are elected by ballot at the ordinary meetings. The ordinary meetings are held fortnightly at the University, the chair being taken at 7.30 p.m. Each Ordinary and Associate member pays an annual subscription of 5s. (except present day and evening students, who pay 2s. 6d., and receive no notices of meetings), and each Associate not less than 10s. per annum.

President—Professor Goodman. Hon. Secretary—Kenneth Greener. Hon. Treasurer—Wilson Gardner. Committee—A. E. Fletcher, F. V. Oldroyd, C. A. Pollock (representing day students); E. R. Branston, F. S. G. Hinings, S. J. Rayner (evening students); H. Mc-Laren, W. B. Odgers, F. H. Pickard, J. H. Slater (past students); S. Moorhouse (associate members).

The Textile Society. The objects for which the Society is established are :

The Agricultural Society. This Society has for its main object the promotion of intercourse between senior and junior students of the Agricultural Department, and affords opportunities of meeting for the discussion of agricultural topics. Papers are read or debates take place fortnightly on Tuesday evenings during the Winter Session. Students of the University or any persons interested in the progress of agricultural science are eligible for membership.

The minimum annual subscription is 1s.

The Musical Society. This Society was formed for the practice of both Vocal and Instrumental Music among the students. The Instrumental section rehearsals are held on Tuesdays at 5 p.m., and the Vocal section rehearsals on Fridays at the same hour. The annual subscription is 18.

President-Professor Rogers. Conductor-Mr. T. J. Hoggett, Secretary-Alan Smailes. Treasurer-Miss Jowett.

The Christian Union (Men's Branch). Affiliated to the Student Christian Movement of Great Britain and Ireland. Staff-President-Mr. Allen. Vice-Presidents-Professors Beaumont and Phillips, Dr. Moorman, Mr. Lowson, Mr. Bennett. Student President-W. E. Cross. Hon. Secretary-E. B. Greening. Hon. Treasurer-W. Smart. Bible Circle Secretary-W. Midgley. Daily Prayer Meeting Secretaries-E. Wilkinson, E. Vernon. Committee-E. W. Wilkinson, K. Curtis, H. Webster, A. Hinckley.

The Christian Union (Women's Branch). Affiliated to the Student Christian Movement of Great Britain and Ireland. *President*—Miss C. M. Brown. *Hon. Secretary*—Miss E. Claridge, B.Sc. *Hon. Treasurer*—Miss A. Outram, B.Sc. *Committee*—Miss S. Findlay, Miss J. Jowett, B.A., Miss K. L. Scholes, Miss E. Tunnicliffe.

The University Lads' and Young Men's Club. The object of the club is to provide evening recreation for working lads who have left school. The club-rooms in 14, All Saints' Street, York Road, are open every evening except Sundays, from 8 to 10. The rooms are under the supervision of a committee of the club, controlled by a committee of members of the University. In addition to various games, some intellectual occupation is usually afforded. The Secretary will be glad to furnish a copy of the annual report, and to supply additional information.

Hon. Secretary and Treasurer—Professor Cohen. Committee—The Vice-Chancellor, Professors Clapham, Connal, Goodman, Grant and Smithells; F. H. Brown, E. Kitson Clark, R. N. Hartley, Dr. Hellier, Dr. Moorman, T. H. Taylor, J. J. Wood.

#### Societies in School of Medicine

The Students' Representative Council.<sup>1</sup> Elected annually by the students of the Department of Medicine from amongst their own number.

It concerns itself with the affairs of the Medical Students, and appoints representatives to serve on the Committee of the University Union, a proportion of whose funds it has at its disposal.

The Secretary of the Council is *ex-officio* the Medical Secretary of the Union Committee.

The Council further appoints a sub-committee to manage the Students' Medical Society, and two of its number serve upon the Refectory Committee.

1 The Officers for 1906-7 are not elected in time for insertion in the Calendar.

The Medical Society is managed by a Sub-Committee of the Students' Representative Council. Meetings are held on alternate Tuesdays during the first and second terms when papers dealing with subjects of medical interest are read and discussed. The session usually commences with an address, and there is an annual Prize Debate.

The Royal Army Medical Corps (Volunteers), Leeds Companies. Medical Students are invited to join this Corps, as recruits are required annually to keep up the establishment. The Volunteer year commences on November 1st, when the enrolment of members commences. The active part of the Drill season is from the beginning of May to the end of July. The Companies go into Camp, usually for the first week in August, with the Regular Forces at Aldershot, Netley Military Hospital, or York. For further information apply to the Instructor at Headquarters.

Commanding Officer-de Burgh Birch, M.D., Major R.A.M.C. (Vols.)

#### Societies of Old Students

The Old Students' Association (Women). The aims of the Association are (1) to hold re-unions three times each session; (2) to provide opportunities of communication between former students by means of a list of addresses to be put in a handbook containing also items of interest from former students, to be sent to all members every two or three years; (3) to provide a loan fund for the use of students whom pecuniary assistance would enable to stay a third year at the University, and others whom the committee consider eligible. Subscriptions : life membership, Ios.; annual, Is.

President—Miss H. Robertson, B.A. Treasurer and Secretary— Miss E. L. Melville, M.A. Secretary—Miss M. Briggs, M.A. Committee 1905-6—Miss J. Armes, B.Sc., Miss L. Burgess, B.A., Miss E. Child, Miss F. Gale, B.A., Miss E. Gilham, Miss J. Holgate, B.A. The Committee for 1906-7 will be elected at the November meeting.

The Leeds Day Training College Club. The objects of the Chub are (1) to provide for a re-union in a social manner of the past students of the Training College, all of whom may become members of the Club; (2) to supply the members with a means of communicating with each other privately, by the annual issue of a list of members and their addresses; (3) to establish a fund which may be used at the discretion of the President for the relief of any past or present student of the Training College who may be in financial distress. Subscription—life membership Ios.; annual, IS.

President—Professor Welton. Vice-Presidents—The Vice-Chancellor, Professors Connal, Kendall, Rogers, Smithells, Stroud; Messrs. B. Broadbent, A. R. Dwerryhouse, D.Sc., C. M. Gillespie, M.A., A. J. Walker, B.Sc., W. P. Welpton, B.Sc. Secretary and Treasurer—S. A. Shorter, B.Sc. Committee—J. H. R. Appleyard, B.Sc., J. Cooke, W. H. Davis, B.A., M. Denby, B.A., E. J. Edwards, B.Sc., J. H. Everett, B.Sc., L. W. K. Fearnley, B.Sc., H. Hartley, M.A., J. T. Hargreaves, R. W. Hutchinson, W. H. Lindsay, B.A., C. E. Moss, B.Sc., A. W. Priestley, M.A., B.Sc., E. Rayner, B.Sc., S. Thorp, B.Sc., J. Walker, B.Sc.

# APPENDIX

# EXAMINATION PAPERS

FOR

SCHOLARSHIPS, &c., 1906

# EXAMINATION PAPERS FOR SCHOLARSHIPS, 1906

# SALT SCHOLARSHIP

# ESSAY

# (Three hours allowed.)

Write an Essay on one of the following subjects :

- (a) The influence of Monasticism on Civilisation.
- (b) The grounds for belief in Progress.
- (c) The influence of theorists on the French Revolution.
- (d) The genius of Thackeray.
- (e) Romanticism.

# ENGLISH LITERATURE. (Three hours allowed.)

#### Answer any six Questions.

- I.—Indicate the chief changes made by Chaucer (a) in the form (b) in the matter, of English Poetry.
- 2.—Discuss Johnson's opinion that Shakespeare excelled in Comedy rather than in Tragedy.
- 3.—Contrast the earlier with the later poetry of Milton.
- 4.—' Dryden is a connecting link between the early Stuart poets and Pope.' Discuss this description.
- 5.—Give a short account of the development of the Novel in the 18th Century.
- 6.—Consider the relation of Coleridge and Scott respectively to the Romantic revival.
- 7.—Write a short appreciation of *either* the Sonnets of Wordsworth *or* the Odes of Keats.
- 8.—Consider the place of *one* of the following in the history of the English Drama : Lyly, Webster, Congreve.

9.-Discuss Tennyson's treatment of the Arthurian legend.

10	-As a	sign the following passages to their respective uthors and works, adding brief notes where needed:
	(1)	Bare ruined choirs, where late the sweet birds sang.
	(2)	I am a man More sinned against than sinning.
	(3)	There's not the smallest orb which thou behold'st But in his motion like an angel sings, Still quiring to the young-eyed cherubins.
	(4)	Athens the eye of Greece, mother of arts.
	(5)	They also serve who only stand and wait.
	(6)	All are but parts of one stupendous whole, Whose body nature is, and God the soul.
	(7)	And when she took unto herself a mate, She must espouse the everlasting sea.
	(8)	O Wind, If winter comes, can spring be far behind?
	(9)	Time writes no wrinkle on thine azure brow.
		HISTORY
		(Three hours allowed.)
		Y

Ι.

Write an essay on one of the following subjects :

- 1. A comparison of the Roman and English characters as shown in their constitutional history.
- 2. Medieval and Modern ideas of Empire.
- 3. The services of the Tudor Monarchy to England.
- 4. Carlyle as a historian.

#### II.

Three of the following questions should be attempted:

- 1. In what way did the political theories of Rousseau influence the course of the French Revolution?
- 2. Compare the position given to the Church in France by the Civil Constitution of the Clergy with its condition under Napoleon's Concordat.

## Examination Papers

- 3. Describe the chief agencies of government used by the Jacobins during the Reign of Terror.
- 4. Explain the causes of the Revolution of Brumaire.
- 5. Sketch Napoleon's dealings with *either* Venice or the Poles.
- 6. Compare the parts played by Prussia and Russia in resisting Napoleon.
- 7. "Napoleon triumphed while he represented the principles of the Revolution: he failed as soon as he had to fight against them." Explain and criticise this.

### FRENCH

#### (Three hours allowed.)

- I.—Translate into English :
  - (a) J'aime le son du cor, le soir, au fond des bois, Soit qu'il chante les pleurs de la biche aux abois, Ou l'adieu du chasseur que l'écho faible accueille, Et que le vent du nord porte de feuille en feuille.

Que de fois, seul, dans l'ombre à minuit demeuré, J'ai souri de l'entendre et plus souvent pleuré ! Car je croyais ouir de ces bruits prophétiques Qui précédaient la mort des paladins antiques.

O montagne d'azur ! ô pays adoré ! Rocs de la Frazona, cirque du Marboré, Cascades qui tombez des neiges entraînées, Sources, gaves, ruisseaux, torrents de Pyrénées ;

Monts gelés et fleuris, trône des deux saisons, Dont le front est de glace et le pied de gazons ! C'est là qu'il faut s'asseoir, c'est là qu'il faut entendre.

Les airs lointains d'un cor mélancolique et tendre. DE VIGNY.

(b) Personne n'apparaissait autour de Carthage, ni sur la mer, ni dans la campagne. Les flots couleur d'ardoise clapotaient doucement, et le vent léger, poussant leur écume ça et la, les tachetait de déchirures blanches. Malgré toutes ses voiles, Salammbo frissonnait sous la fraîcheur du matin;

# Salt Scholarship

le mouvement, le grand air l'étourdissaient. Puis le soleil se leva; il la mordait sur le derrière de la tête, et involontairement elle s'assoupissait un peu. Les deux bêtes, côte à côte, trottaient l'amble en enfonçant leurs pieds dans le sable muet.

Au coin d'un bois de lauriers-roses, son cheval fit un grand écart devant le cadavre d'un homme, étendu par terre. L'esclave aussitôt la rétablit sur ses coussins.

Par excès de précaution, maintenant il allait à pied pres d'elle, entre les chevaux; et il les fouettait avec le bout d'un lacet de cuir enroulé à son bras, ou bien il tirait d'une panetière suspendue contre sa poitrine des boulettes de froment, de dattes et de jaunes d'œufs, enveloppées dans des feuilles de lotus et il les offrait à Salammbô, sans parter, tout en courant.

FLAUBERT.

- II.—Translate into French :
  - (a) What are you thinking of doing to-day? It is a beautiful day. Would you be willing to go for a good walk into the country? We could start by the ten o'clock train and go as far as Versailles. We should then walk for three hours and stop at a village where we should have dinner. There is a train that would bring us back to Paris at six in the evening.
  - (b) Mrs. Jennings, Lady Middleton's mother, was a good humoured, merry, fat, elderly woman, who talked a great deal, seemed very happy and rather vulgar. She was full of jokes and laughter, and before dinner was over had said many witty things on the subject of lovers and husbands; hoped they had not left their hearts behind them in Sussex, and pretended to see them blush whether they did or not. Marianne was vexed at it for her sister's sake, and turned her eyes towards Elinor to see how she bore these attacks, with an earnestness which gave Elinor far more pain than could arise from such commonplace raillery as Mrs. Jennings's. JANE AUSTEN.

- III.—Write an Essay in French of about 200 words on one of the following subjects :
  - (a) Le climat de l'Angleterre.
  - (b) La Revolution Française.
  - (c) Un voyage en France.
- IV.-Grammar :
  - (a) Write down the 2nd person plural of the present indicative of *crôitre*, *faire*, *plaire*, *voir*, *boire*, and the 2nd person singular of the perfect (or past indefinite) of *courir*, *mourir*, *se remettre*, *revenir*, *marcher*.
  - (b) Construct sentences in which the following words are correctly used: sus, dessus, au dessus, par-dessus.
  - (c) Construct sentences intended to show the difference between (1) vers and envers; (1) épouser and marier; (3) vaincre and conquérir; (4) plutôt and plus tôt.

### LATIN.

# 1.-Translate Livy XXIII. Cap. 10 §§ 5-10:

egressus curia in templo magistratuum consedit conprehendique Decium Magium atque ante pedes destitutum causam dicere iussit. qui cum manente ferocia animi negaret lege foederis id cogi posse, tum iniectae catenae, ducique ante lictorem in castra est iussus. quoad capite aperto est ductus, contionabundus incessit ad circumfusam undique multitudinem vociferans: 'Habetis libertatem, Campani, quam petistis; foro medio, luce clara, videntibus vobis nulli Campanorum secundus vinctus ad mortem rapior. quid violentius capta Capua fieret? ite obviam Hannibali, exornate urbem diemque adventus eius consecrate, ut hunc triumphum de cive vestro spectetis.' haec vociferante cum moveri volgus videretur, obvolutum caput est, ociusque rapi extra portam iussus. ita in castra perducitur; extemploque impositus in navem et

### Salt Scholarship

Carthaginem missus, ne motu aliquo Capuae ex indignitate rei orto senatum quoque paeniteret dediti principis et, legatione missa ad repetendum eum, aut negando rem, quam primam peterent, offendendi sibi novi socii, aut tribuendo habendus Capuae esset seditionis ac turbarum auctor.

## Turn into Oratio Obliqua :

Habetis libertatem, Campani, quam petistis; foro medio, luce clara, videntibus vobis nulli Campanorum secundus vinctus ad mortem rapior. quid violentius capta Capua fieret? ite obviam Hannibali, exornate urbem diemque adventus eius consecrate, ut hunc triumphum de cive vestro spectetis?

2.-Translate Vergil Georg. III., §§ 515-530:

ecce autem duro fumans sub vomere taurus concidit et mixtum spumis vomit ore cruorem extremosque ciet gemitus. it tristis arator maerentem abiungens fraterna morte iuvencum, atque opere in medio defixa relinquit aratra. non umbrae altorum nemorum, non mollia possunt prata movere animum, non qui per saxa volutus purior electro campum petit amnis; at ima solvuntur latera, atque oculos stupor urget inertis, ad terramque fluit devexo pondere cervix. quid labor aut benefacta iuvant? quid vomere terras invertisse gravis? atqui non Massica Bacchi munera, non illis epulae nocuere repostae : frondibus et victu pascuntur simplicis herbae. pocula sunt fontes liquidi atque exercita cursu flumina, nec somnos abrumpit cura salubris.

3 --- Translate into Latin :

Insensible to the severity of the weather, Napoleon instantly halted, dismissed his own suite to a distance, called the soldiers together and harangued them on the situation and the prospects of the campaign. He thanked them for the constancy with which they had encountered difficulties and endured privations,

#### Examination Papers

the severest to which they could be exposed in war; demonstrated to them the situation of the enemy, cut off from his own country, surrounded by superior forces, and obliged to fight in order to open the only avenue which remained for his escape. In the great battle which was approaching he confidently promised them victory, if they continued to act with the resolution which they had hitherto shown. This speech was listened to with profound attention.

# CLOTHWORKERS' DAY TEXTILE SCHOLARSHIPS

## ENGLISH COMPOSITION

Write an Essay on one of the following subjects :

- (a) The English Revolution of 1688.
- (b) Gardens and Gardening.
- (c) A description of any Yorkshire dale.
- (d) Memory.

#### ARITHMETIC AND ALGEBRA

## (One and three-quarter hours allowed.)

- 1.—If  $\pounds_1$  be equal to 25.5 francs, and 1 kilogram to 2.2046 lbs., find, to the nearest penny, the price per cwt., of a substance 2 kilograms of which cost 9.5 francs.
- 2.—The wages of one man at 5s. 3d. per day, and of another 4s. 3d. a day; a piece of work costs  $\pounds 5$  10s. 3d. for labour when done by the first, and  $\pounds 5$  19s. when done by the other. What would it cost if they do it together?
- 3.—Three persons A, B, C, enter into partnership: A contributes £840, B £1,200, C £1,560. A acts as manager for which he receives 10 per cent. of the profits, and the remainder of the profits is divided between all three partners in proportion to their contributions. What percentage of the profits does each receive?

Clothworkers' Scholarship

4.—Simplify:  $\frac{2x^2 - 5x + 3}{2x - 3} - \frac{3x^2 + x - 4}{1 - 1} + \frac{2(3x^2 - 13x - 10)}{3x + 2}$ 5.—Determine values of A, B, C, D so that  $x^2 - 5x + 7 = A + B(x - 1) + C(x - 1)^2 + D(x - 1)^3.$ 

6.—What value of x will make  $(x + \frac{1}{2})^2 - (x - \frac{3}{2})^2$  equal to 2x + 3?

Solve: 
$$\frac{x}{2} + \frac{y-3}{3} = 3,$$
  
 $\frac{x-3y}{4} = 1 - \frac{4y-x}{8}$ 

7.—A man can walk a certain distance in 4 hours; if he were to increase his rate of walking by one-fifteenth he could walk one mile more in that time. What is his rate of walking?

### TEXTILE INDUSTRIES (WEAVING AND DESIGNING)

# (Three hours allowed.)

# Ten Questions only to be attempted.

- Briefly indicate in tabular form the various natural textile fibres, giving (a) the origin; (b) the chemical features; (c) the physical characteristics; (d) the properties; and (e) the uses of each.
- Name in order the processes and operations employed to convert greasy merino fleece wool into either (a) fine saxony yarns, or (b) fine worsted yarns.
- 3.—Define the character of typical woollen and worsted threads, and state which system of construction should be used to produce yarns for cloths—
  - (a) Smart in weave detail.
  - (b) Capable of taking different kinds of finish.
  - (c) Having good milling properties.
  - (d) Fine in texture.
  - (e) Of light weight yet having a full handle.
  - (f) At a minimum cost.
  - (g) Of sound wearing quality.

4.—Define sateen weaves, stating for what purposes they are employed in constructing backed fabrics. Make sateens on 6, 8, 11 and 13 ends, and construct two weaves on each base.

# 5.--Required designs as follows :

(a) A stripe design complete on 72 ends, composed of

three weaves derived from the  $\frac{5}{4}$  twill. Supply draft and pegging plan.

- (b) A check design on 48 threads and picks composed of two 8-shaft weaves which must cut perfectly.
  - For what types of fabrics would the above designs be applicable? Give suitable counts, set, and picks.
- 6.—Construct a vesting design on 48 ends and picks with extra spotting in two colours, the ground to be a

check composed of  $\frac{3}{3}$  twill and mat.

- 7.—Compare the structure of warp and weft backed cloths, supplying examples.
- 8.—What is meant by the "diameter and intersection theory" of setting cloths? Using 2/30's worsted yarn, give suitable settings for the following weaves :

 $\frac{3}{3}$  twill; 8-shaft twilled mat; 13-shaft warp cork-

screw, and 
$$\frac{3}{3}$$
 warp cord.

- 9.—Describe any parts in the running of a tappet loom, where defects are likely to occur.
- 10.—What type of under-motion is most suitable and why, for depressing the healds in the Yorkshire tappet loom, and in what essential does the shedding differ from the Woodcroft?
- 11.—Explain the friction let-off and change-wheel take-up motions. Give the formula for finding the size of the change-wheel in the latter motion.

- 12.---Define the following terms:
  - (a) Contrasts of tone, (b) contrasts of tint, (c) contrasts of hue.
- 13.—Illustrate the various methods of producing 'colour' checks.
- 14.—Show how colour is modified by the kind of material and the method of yarn construction employed.
- 15.—Analyse the accompanying pattern, giving weave, order of colouring, and ends and picks per inch.
- 16.-(a) A yarn is composed of:
  - 1 end of 40's dark green worsted, at 3/2 per lb.
  - I end of 60's light green worsted, at 3/6 ,,
  - $1 \text{ end of } 80/2 \text{ white silk}, \quad \text{at } 10/-,$
  - Find the resultant counts in worsted, the price per lb., and quantities of each yarn required to make 120 lbs. of the twist.
  - (b) Calculate the weight and cost of material for a cheviot suiting made thus:

		WA	RP.		40 e	nds.			
2/20	skeins	black,	at 2/-	per ll	D. 3	I	3	-	$1 \\ 48 \text{ ends.}$
22	22	twist,	at 2/2	,,	2	2	-	I	1 48 ends.
IO	"	green	at 1/9	) ,,	-	-	I	-	I)
				FT.					
	10 ske	ins bla	ck,	at 1,	/9 pe	r lb.	50	4)	56 picks.

10 ,, dark blue at 1/9 ,, 1 1/56 picks.

70 yards of warp, set 70 inches wide in loom, 12's reed 2's, and woven with 22 picks per inch; length of piece from loom 64 yards, Add 5% for waste of weft in weaving. Examination Papers

# FREEHAND DRAWING AND DESIGN,



#### Clothworkers' and Entrance Scholarships

421

- r.—The design must be copied and enlarged to about oneand-a-half times the size.
- 2.—The outline of the design must be broadly sketched in, and a portion must be worked out in detail, the latter to be subsequently washed in with the brush, Indian ink or ordinary black ink to be used for this purpose.

3.—Tracing paper may be used in drawing the repeats.

## ENTRANCE SCHOLARSHIPS

The papers set for Entrance Scholarships will be found in the Matriculation Calendar. (See page 133).

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# INDEX OF CONTENTS

						F	Page.
Accountancy :						-	"BCI
Classes							189
Examination						185,	186
Act, Leeds University, 1904.							48
Act, University of Leeds, 190	04						
						115,	
				•••		19	, 50
Agriculture, Department of :							
			•••	•••	•••	•••	277
				•••			343
			•••	•••		208,	
				•••	•••		4
Anatomy, Department of :							3 T M
Englishting			•••	206	 , 298,	···	317
Art applied to Textile Design			•••			JII,	262
Arts:	1		•••	•••			202
D 1 C J E 1							102
0							163
T) 1 T) 1							134
17 1/							IOI
Professors, Lecturers, &							106
A 1 TTT ( T)' 1'							330
A 3'4							41
Auch putting II mineration							21
							273
Bacteriology, Medical:							
							320
					299,	305,	307
Biology, Department of :							
					÷		238
					203,	298,	310
Boarding Houses, Register of	f				÷		124
Boards of Faculties :							
				••	***		40
							102
Botany: (see also Biology)							
				•••	• • •	••••	
Examinations			•••	132	205,	216,	223
							0
	•••	••	•••	••	2	r <b>, 3</b> 0	, 85
Charter, the Royal :							
							17
I. Foundation of the U			•••	8+1	***		18
2. Powers of the Unive			•••	•••		***	18
3. Matriculation Exami	ination			•••		**	20

Charter,	the Royal	Contin	nued					1	Page.
4.	Visitor					14.7			21
5.	Authorities	of the	Univers	sity					·21
6.	The Chance	llor							21
7.	The Pro-Ch	ancello	or						22
8.	The Vice-C			***	***				22
9.	The Pro-Vie	ce-Cha	ncellor		***				22
10.	The Court			149	***				22
II.	Alteration o	f Statu	ites and	Ordin	ances				24
12.	The Counci	1							25
13.	The Senate								25
14.	Faculties				***				25
15.	Convocation	1		+1+					26
16.	Powers of (	Convoc	ation		***				26
17.	Regulations				***				27
I8.	The Treasur	er			***			•••	27
19.	Members of	the U	niversit	у			•••		27
20.	Advisory Co	mmitt	ees						27
21.	Examiners a	nd Ex	aminatio	ons					28
22.	Eligibility o	f Won	nen for (	Office,	Memb	pership	, etc.		28
23.	Fellowships	, Schol	larships,	etc.	111				28
24.	Real Proper	ty							28
25.	Fees								29
26.	Alterations,	Amen	dments,	Additi	ons				29
27.	Meaning of	"Spec	cial Res	olution	,,				29
28.	Meaning of	"Stat	utes,"'	'Ordin	ances,	" " R	egulatio	ns"	29
29.	Construction	of the	e Charte	er					29
Chemist	y, Applied	: see	Dyeing	, Fuel	and	Metal	llurgy,	and	
	Leather In						0,,,		
Chemist	y, Departme	ent of :							
Clas									232
	minations						23. 298.	307.	
	Guilds Insti				-	-			225
		cuic, r	JAAnnina	tions o				•••	440
Classics									.60
Clas		***		***	***				
	-	•••				131, 1	35, 138,	143,	
Clinical	Lecturers	114	***	444	***				112
Coal Min	ning : see M	ining.							
Commer	ce, Departm	ent of:							
-	· •								187
			-						184
									186
-	cial French a								190
	cial Law, C						***		188
	ees on Obje			ances		***			
								24, 41	
	ees, Advisor	y		•••	•••	•••		21	, 95
Convoca								26	10
	position	•••			•••			26	
	ers	•••		•••	•••		•••	•••	26
1,69	ister								83

Council:							J	Page
G								, 33
D								, 36
List of Members								93
County Lectures :								
Agriculture								343
Mining								345
Court :								
Composition			111				23	, 30
								22
List of Members			***					86
Dairying							280,	344
Day Training College							'	178
Degrees :								<i>`</i>
Conferment of		***				18, 2	4, 32	, 80
In Arts								134
,, Commerce								184
T		***						192
0 1								202
,, Medicine and	Surger	y						297
,, Dental Surger								309
Dentistry, School of:								
Designed								309
T1 1								312
T								II2
Diplomas :Ordinano								159
1 CL 1 3 5' '								256
0								186
Dental Surgery								312
D '		***						265
								159
TP 1 in the second							248,	252
Leather Manufac								271
								306
Teachers of Fren								162
Teachers of Gerr								162
Dispensary, Leeds Pu								329
	***					0	251,	
Dress, Academic							,	120
Dyeing and Tinctoria			Depart		-			
D CI								266
								265
Diploma Evening Classes		***			•••			338
373 1 1		***			•••		208,	
Examinations					••••		200,	220
-								
Economics :								-0-
Day Classes		***	***	***	•••	•••	•••	187
Evening Classes	•••							339
Examinations		***	***	***	140,	152, 157,	105,	203

Classes	Education, Depar	tment of :							Page
Day Training College       178         Diploma       140, 158, 210         Engineering, Civil and Mechanical, Department of :       249         Diplomas       248         Evening Classes       233         Examinations       203, 205, 219, 223, 307         Engineering, Electrical, Department of :       233         Day Classes       253         Diploma       253         Evening Classes       334         Examinations       203, 205, 219, 223, 307         Engineering, Electrical, Department of :       233         Day Classes       253         Diploma       253         Evening Classes       334         Examinations       167         Evening Classes       39         Examinations       130, 136, 139, 144, 148, 155, 203         Entromology, Classes       241         Evening Classes       242         Diploma       130, 136, 139, 144, 148, 155, 203         Evening Classes       242         Evaminations       241         Evening Cl	Classes	***							181
Examinations       140, 158, 210         Engineering, Civil and Mechanical, Department of:       249         Day Classes	Day Training	College							178
Engineering, Civil and Mechanical, Department of :       249         Day Classes	Diploma								
Day Classes							140,	158,	210
Diplomas			hanica	l, Dep	artmen	t of :			
Evening Classes	Day Classes								249
Examinations        203, 205, 219, 223, 307         Engineering, Electrical, Department of :         253         Diploma         253         Evening Classes          253         Evening Classes           253         Evening Classes            253         Day Classes   .	Diplomas								248
Engineering, Electrical, Department of :       253         Day Classes       253         Diploma       253         Evening Classes       334         Examinations       205, 220         English Language and Literature, Department of :       167         Day Classes       339         Examinations       130, 136, 139, 144, 148, 155, 203         Entomology, Classes       332         Examinations :       28, 81         City and Guilds Institute       28, 81         Degree       28, 81         Degree       28, 81         Degree       134, 184, 192, 202, 202, 297, 309         Diploma       28, 81         Degree       134, 184, 192, 202, 202, 292         Lists       20, 292         Lists       116, 247, 289         Fees       389         Matriculation       120, 292         Lists       341         Faculties :       25, 39         Constitution and Powers       25, 39         Deans       40, 82         List of Members.       101         Farriery, Classes       300         Forensic Medicine, Department of:       300         Classes       300	Evening Clas	ses							333
Day Classes       253         Diploma       253         Evening Classes       334         Examinations       205, 220         English Language and Literature, Department of :       339         Day Classes       167         Evening Classes       339         Examinations       130, 136, 139, 144, 148, 155, 203         Entomology, Classes       241         Evening Classes       253         City and Guilds Institute       225         Conduct of       28, 81         Degree       134, 184, 192, 202, 297, 309         Diploma       150, 186, 224, 306, 312         Entrance       116, 247, 289         Fees       120, 292         Lists       389         Matriculation       120, 292         List of Members       25, 39         Deans       25, 39         List of Members       341         Fees       101         Farriery, Classes       347         Fever Hospital, Leed	Examinations					203,	205, 219,	223,	307
Diploma       253         Evening Classes       334         Examinations       205, 220         English Language and Literature, Department of:       209         Day Classes       130, 136, 139, 144, 148, 155, 203         Entomology, Classes       332         Examinations:       332         Examinations:       339         City and Guilds Institute       225         Conduct of       288, 81         Degree       134, 184, 192, 202, 297, 309         Diploma       159, 186, 224, 306, 312         Entrance       159, 186, 224, 306, 312         Entrance       120, 292         Lists       389         Matriculation       120, 292         Lists       341         Faculties:       341         Constitution and Powers       25, 39         Deans       40, 82         List of Members       347         Fees       347         Fever Hospital, Leeds City       349         Forestry, Classes       340         French, Department of:       340         Classes       347         Fever Hospital, Leeds City       349         Forestry, Classes       340 <t< td=""><td>Engineering, Elec</td><td>trical, De</td><td>partme</td><td>ent of a</td><td></td><td></td><td></td><td></td><td></td></t<>	Engineering, Elec	trical, De	partme	ent of a					
Diploma       253         Evening Classes       205, 220         English Language and Literature, Department of:       205, 220         English Language and Literature, Department of:       130, 136, 139, 144, 148, 155, 203         Examinations       130, 136, 139, 144, 148, 155, 203         Entomology, Classes       241         Evening Classes       241         Evening Classes       243         Evening Classes       241         Evening Classes       243         Evening Classes       241         Evening Classes       243         Evening Classes       243         Conduct of       243         Degree       243         Degree       243         Examinations:       243         Degree       243         Degree       243         Degree       244         Sconduct of       242         Extansion Lectures       25, 39         Matriculation       25, 39         Deans       244         Fees       244         Fees       244         Fees       244         Sconstitution and Powers       25, 39         Deans       244 </td <td>Day Classes</td> <td></td> <td></td> <td></td> <td>***</td> <td></td> <td></td> <td></td> <td>253</td>	Day Classes				***				253
Evening Classes					***				253
Examinations		ses							334
English Language and Literature, Department of :       167         Day Classes       130, 136, 139, 144, 148, 155, 203         Entomology, Classes       130, 136, 139, 144, 148, 155, 203         Entomology, Classes       241         Evening Classes       232         Entomology, Classes       241         Evening Classes       232         Examinations:       241         City and Guilds Institute       225         Conduct of       226, 81         Degree       134, 184, 192, 202, 297, 309         Diploma       116, 247, 289         Fees       116, 247, 289         Fees       120, 292         Lists       341         Faculties:       25, 39         Constitution and Powers       25, 39         Deans       40, 82         List of Members.       101         Farriery, Classes       347         Fever Hospital, Leeds City       347         Fever Hospital, Leeds City       329         Forensic Medicine, Department of:       320         Classes       320         Forestry, Classes       320         Forestry, Classes       320         Forestry, Classes       325								205,	220
Day Classes       167         Evening Classes       339         Examinations       130, 136, 139, 144, 148, 155, 203         Entomology, Classes       241         Evening Classes       332         Examinations:       241         City and Guilds Institute       225         Conduct of       225         Conduct of       227         Conduct of       228, 81         Degree       134, 184, 192, 202, 297, 309         Diploma       159, 186, 224, 306, 312         Entrance       159, 186, 224, 306, 312         Entrance       120, 292         Lists       389         Matriculation       120, 292         Lists       389         Matriculation       129, 289         Extension Lectures       341         Faculties :       20         Constitution and Powers       25, 39         Deans       40, 82         List of Members       345         Fees       117, 291         Fellowships, University       347         Fever Hospital, Leeds City       329         Forensic Medicine, Department of:       329         Classes       300         Forestry,								0.	
Evening Classes	000								167
Examinations       130, 136, 139, 144, 148, 155, 203         Entomology, Classes       241         Evening Classes       332         Examinations :       332         City and Guilds Institute       225         Conduct of       28, 81         Degree       28, 81         Degree       28, 81         Degree       134, 184, 192, 202, 297, 309         Diploma       159, 186, 224, 306, 312         Entrance       116, 247, 289         Fees       120, 292         Lists       120, 292         Lists       120, 292         Lists       129, 289         Extension Lectures       101         Farriery, Classes       101         Farriery, Classes       117, 291         Fellowships, University       347         Fever Hospital, Leeds City       329         Forensic Medicine, Department of:       329         Classes       329         Forestry, Classes       320         Forestry, Classes       225         Examinations       320         Forestry, Classes       320         Forestry, Classes       320         Forestry, Classes       320 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>									
Entomology, Classes       241         Evening Classes       332         Examinations:       332         City and Guilds Institute       225         Conduct of       28, 81         Degree       28, 81         Degree       134, 184, 192, 202, 297, 309         Diploma       159, 186, 224, 306, 312         Entrance       116, 247, 289         Fees       120, 292         Lists       120, 292         Lists       120, 292         Lists       129, 289         Extension Lectures       241         Faculties:       25, 39         Constitution and Powers       25, 39         Deans       40, 82         List of Members.       101         Farriery, Classes       117, 291         Fellowships, University       347         Fever Hospital, Leeds City       329         Forensic Medicine, Department of:       329         Classes       320         Forestry, Classes       320         Forestry, Classes       223         Examinations       300         Forestry, Classes       325         Examinations       325         Examinations <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>									
Evening Člasses					-				
Examinations :       City and Guilds Institute       225         Conduct of       28, 81         Degree       134, 184, 192, 202, 207, 309         Diploma       159, 186, 224, 306, 312         Entrance       116, 247, 289         Fees       116, 247, 289         Matriculation       389         Matriculation       389         Matriculation       389         Deans       389         Lists       389         Deans       40, 82         List of Members       101         Farriery, Classes       101         Farriery, Classes       117, 291         Felowships, University       347         Fever Hospital, Leeds City       329         Forensic Medicine, Department of:       329         Classes       325         Examinations       300         Forestry, Classes       242         French, Department of:       162         Classes       162         Examinations       134, 136, 138, 147, 154, 162, 185, 186, 203, 204, 212         Fuel and Metallurgy, Department of       274         Geography:       274         Geography:       188, 246									
City and Guilds Institute									334
Conduct of		de Trestitue	t -						225
Degree        134, 184, 192, 202, 297, 309         Diploma        159, 186, 224, 306, 312         Entrance        159, 186, 224, 306, 312         Entrance        116, 247, 289         Fees         120, 292         Lists         389         Matriculation            Faculties:            Constitution and Powers            Deans             Faculties:             Constitution and Powers             Faculties:              Constitution and Powers              Faculties:              Constitution and Powers              Faculties:              Cl									
Diploma          159, 186, 224, 306, 312         Entrance         116, 247, 289         Fees             Matriculation             Matriculation              States               Faculties :       Constitution and Powers              Constitution and Powers               Deans                Faculties :       Constitution and Powers              Deans                Faculties :       Constitution and Powers              Feast <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>									
Entrance       116, 247, 289         Fees       120, 292         Lists       129, 289         Extension Lectures       129, 289         Deans       120, 381         List of Members       101         Farriery, Classes       101         Fees       117, 291         Fellowships, University       117, 291         Forensic Medicine, Department of:       225         Classes       329         Forestry, Classes       320         Forestry, Classes       320         Forestry, Classes       320         Forestry, Classes       162         Examinations       131, 1					0.17				
Fees									
Lists									
Matriculation       129, 289         Extension Lectures       341         Faculties :		•••							
Extension Lectures </td <td></td> <td></td> <td>•••</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>			•••						
Faculties :       25, 39         Deans       40, 82         List of Members       101         Farriery, Classes       345         Fees       117, 291         Fellowships, University       347         Fever Hospital, Leeds City       347         Forensic Medicine, Department of:       325         Classes       325         Examinations       300         Forestry, Classes       169         Diplomas for Teachers       162         Examinations       151, 136, 138, 147, 154, 162, 185, 186, 203, 204, 212         Fuel and Metallurgy, Department of       274         Geography:       188, 246									
Constitution and Powers       25, 39         Deans       40, 82         List of Members       101         Farriery, Classes       345         Fees       117, 291         Fellowships, University       347         Forensic Medicine, Department of:       325         Classes       325         Examinations       300         Forestry, Classes       300         Forestry, Classes       300         Forestry, Classes       162         Examinations       162         Classes       162         French, Department of:       162         Classes       162         Examinations       162         Examinations       131, 136, 138, 147, 154, 162, 185, 186, 203, 204, 212         Fuel and Metallurgy, Department of       274         Geography:       188, 246	Extension Lecture	es						• • •	341
Constitution and Powers       25, 39         Deans       40, 82         List of Members       101         Farriery, Classes       345         Fees       117, 291         Fellowships, University       347         Forensic Medicine, Department of:       325         Classes       325         Examinations       300         Forestry, Classes       300         Forestry, Classes       300         Forestry, Classes       162         Examinations       162         Classes       162         French, Department of:       162         Classes       162         Examinations       162         Examinations       131, 136, 138, 147, 154, 162, 185, 186, 203, 204, 212         Fuel and Metallurgy, Department of       274         Geography:       188, 246	Faculties :								
Deans		and Power	rs					25	, 39
List of Members	T								
Farriery, Classes <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
Fees        II7, 29I         Fellowships, University            Fever Hospital, Leeds City            Forensic Medicine, Department of:            Classes             Forensic Medicine, Department of:             Classes               French, Department of:                Diplomas for Teachers <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>345</td></td<>									345
Fellowships, University									
Fever Hospital, Leeds City   <									-
Forensic Medicine, Department of: Classes325 25 2000Forestry, Classes300 2000Forestry, Classes242 2000French, Department of: Classes162 162 162 162 162 162 162 163 164 									
Classes									3-9
Examinations         300         Forestry, Classes         242         French, Department of:         242         Classes         169         Diplomas for Teachers         162         Examinations       131, 136, 138, 147, 154, 162, 185, 186, 203, 204, 212       Fuel and Metallurgy, Department of         274         Geography:             188, 246	01								225
Forestry, Classes          242         French, Department of:          169         Diplomas for Teachers          162         Examinations 131, 136, 138, 147, 154, 162, 185, 186, 203, 204, 212       Fuel and Metallurgy, Department of         274         Geography:             274									
French, Department of:								14.8	
Classes  <					***				242
Diplomas for Teachers <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>									
Examinations       131, 136, 138, 147, 154, 162, 185, 186, 203, 204, 212         Fuel and Metallurgy, Department of        274         Geography:        188, 246	Classes					100			
Fuel and Metallurgy, Department of 274 Geography: Classes 188, 246									
Geography: Classes		5 131, 13	6, 138,	147,1	154, 162	, 185	, 186, 203,	204,	
Classes 188, 246	Fuel and Metallu	irgy, Dep	artmer	nt of	111				274
	Geography:								
Examinations 131, 185, 186, 203	Classes							188,	246
							131, 185,	186,	203

Geology, Department of:					]	Page
Classes						243
Examinations				203, 205,		
German, Department of:			017	0, 0,	• ·	0
Classes						171
Diplomas for Teachers						162
Examinations 131, 136, 13	8, 147, 1	54, 162	, 185,	186, 203,	204,	212
Graduates						374
Graphics, Classes			111		in.	251
Greek, Department of :						
Classes		***				163
Examinations	•••	131,	135,	138, 143,	153,	203
Gymnasium					• • •	116
Gynæcology, Department of :						
Classes					•••	323
Examinations				111	•••	300
Hall of Residence						122
History, Department of:					•••	123
Classes						175
Examinations	130			150, 156,		
Honorary Graduates, List of			- 375			374
Honours, Graduation in						
Honours Lists :					,	5
University of Leeds	***					385
Victoria University						386
Horticulture, Classes						280
Hospital Attendance				·		328
Huddersfield, Technical Colleg	e					51
Infirmary, Leeds General						
Innimary, Leeds General						329
Laboratory Fees						118
Latin, Department of:						110
Classes						165
Examinations				138, 143,		
Law, Department of:		- )- ,	- 555	-30, 143#	* 341	203
Degrees, Courses of Study	and Exa	minatio	ns			192
Leather Industries, Department				- ···		- ) -
Day Classes						272
Diploma						271
Evening Classes						339
Examinations				209,		
Library :						0
University						124
School of Medicine						294
Lockers for Books, etc.					122,	294
Lodging Houses, Register of						124
Logic :						
Classes						173
Examinations			111			207
Lyddon Hall						123

- 7	r .	7
- 7	\$2	dex
1	10	ucr

Materia Medica :						1	Page.
Classes							324
Examinations .						298,	311
Maternity Home							330
Mathematics, Department							
Classes							227
Examinations	130,	137, 140,	185,	186,	203, 205,	213,	222
Matriculation Examination							
Joint Matriculation Bo	bard				2	0, 42	, 80
Regulations						129,	289
Scholarships							347
Mechanics :							
Classes							228
Examinations						131,	203
Medicine, Department of :						5,	0
Classes							321
Examinations							300
Medicine, School of :			•••				500
Board of the Faculty							103
-	•••		•••			•••	
Courses	•••		•••			•••	315
Degrees			•••	•••		•••	297
Faculty							IOI
Hospital Practice			•••	•••	•••	•••	328
Professors, Lecturers,			•••			•••	IIO
Students						•••	401
Members of the University	•••					•••	27
Mental Diseases :							
Classes			•••			•••	326
Examinations			•••				300
Metallurgy, Department of	Fuel	and		• • •			274
Microscopy :							
Classes	***					273,	319
Examinations	***					•••	307
Mining, Department of :							
Day Classes							257
Diploma							256
Evening Classes							335
Examinations						208,	220
Mirfield, College of the Re	surre	ction					51
Museums					260,	268,	295
Music, Classes							183
							-
Natural History, Classes			•••	••••		•••	242
Nature Knowledge, Classes	· · · ·		•••			•••	243
Needlework, Classes			•••		•••	••••	183
Observatory, Cecil Duncon	be						126
Obstetrics, Department of :							
<b>C</b> 1							322
Classes Examinations			•••		••••	•••	
			 of :		•••	•••	300
Ophthalmology and Otolog							226
Classes			•••				326
Examinations	1000						305

Ordinan	ces of the Un	iversity	:					1	Page
-Pow	ver of Makin	g							23
Ι.	Affiliated Co	lleges a	and Ins	stituti	ons				50
	Degrees in A								51
3.		ommer							56
4.		aw							58
5.		cience							60
~		e 21 1		~					70
7-	,, ,, <u>,</u>	antal	Surger	ourge v	1 9				
8	,, ,, I Recognition	of Vi	otoria	TInis	arcity (	~ ~re	and	Ex-	74
0,	aminations	01 11	ciona	Univ	cisity (	Jours			=6
0	aminations Recognition	 			 F				76
9.								ther	
	Residential								77
10.	Conferment					Stu	dents of	the	. 0
	Yorkshire	College							78
II.	Standing of	certain	Gradu	ates	in proce	eedin	g to Hig	gher	
	Degrees								79
12.	Award of D	egrees l	by Sen	ate					80
13.	,,	,,	Cou	incil					80
14.	Joint Matric	ulation	Board	and	Joint Co	mmi	ttees		80
	Diplomas								81
16.	Regulations	for Pro	ocedur	e					SI
	Fees								SI
18.	Regulations	for Exa	minat	ions					SI
10	Admission to	Fyam	inatio	ne					SI
	External Ex								82
	Prizes						•••		82
	Examination		 			 Logt			82
									82
23.	Tenure of O	mce of	Deans	OIF	acumes				
24.	· · · · · ·	"	Additi	ionai		'S OI	the Senai	.e	82
25.	Register of	Lonvoc	ation	• • •		• • •		•••	83
Palæonte	ology, Classes	S							244
Patholog	y and Bacter	iology.	Depa	rtmen	t of:				
Cla	sses		20 optim						320
Fva	minations						299, 305.		
Dhamman	y, Classes		tine T						244
	ology and T	-		*					
			•••				0		
	minations		•••	•••	• • •	•••	298	, 299,	311
Philosop	bhy, Departm	ent of :							
Clas	sses								177
Exa	minations					136,	139, 151,	157,	203
Physics,	Department	of:				• •	0	0	Ŭ
Cla	sses								228
	minations							. 300.	312
	gy, Departm				~, =-+,	,	-90, 307	, 500,	5-2
	sses								318
				***	205	217	 223, 298		310
			***		205,	21/,	223, 290	0 0 0	313
Prizes			•••	•••			20, 2		
	re, Regulatio		•••					2	, 81
Pro-Cha	ncellor							22, 3	0, 85

D									Page
	Vice-Chancellor	•••		***					, 85
	essors	***	1.1.1	***	***				106
	hology, Classes		and the	***			***		177
Publ	ic Health :								ant
	Diploma		***	444	10				306
	Classes		***	111	111		***	•••	327
	Examinations		***		***	11.1	***	300,	300
p.,	In a Date of								183
	ding and Recitati				***			104	
	ctory							124,	294
кер	resentatives of P					ions, e	cc., on		0.1
D	Court and Counc			***	T		0		, 93
	resentatives of the			n otner		tions,	œc.	•••	104
Rese	earch Students, F	ees for				***	***	•••	119
C:	town Chamisture (	Jagana							235
	tary Chemistry, C			***					
	tation, Practical	WORK 1	.11	***	***		***		328
Scho	plarships :							260	267
	Akroyd				***			360,	
	Baines, Edward	•••		***	111		111	356,	~ ~ ~
	Brown				***	***	44.8	358,	
	Clothworkers'		***				***	353,	
	Cooke & Co., W	illiam		122		***	***		363
	Craven			***					361
	Dyeing		***		***				349
	Emsley				***	***	414		355
	Exhibition of 18	51			111	***			349
	Gilchrist					111	444		348
	Infirmary								352
	Leeds City Cour	ncil							354
	Leighton	***			***				351
	Medical								364
	Salt				***				352
	Summers, Willia	m		***					357
	Tannett-Walker	Bursar	ies	***					362
	University								348
	Wheatley, Charl	es					141		357
Sch	ools, Examination	ı of		***			***	20	, 82
Scie	nce and Technolo	bgy:							
	Board of Science		[echnol	ogy	***		***		103
	Courses in Scien					ain.			227
		nology							247
	Degrees and Dip								202
	Faculty of Scien								IOI
	T h	nology							102
	Professors and L			ience					107
				echnolo					108
Som	,, ate:	,,	10	ennon	187				100
Sen	Constitution and	Powe	rc					25 25	82
			15			***		25, 37	
C	List of Members	5					***		100
200	ieties and Clubs		4.4.5						404

							1	Page.
Standing of Graduat		roceedi	ng to h	igher l	Degrees			79
Statutes of the Unive		Count						
I. Composition				•••	•••	•••	• • •	30
2. Composition					•••	•••	• • •	33
3. Powers of the								36
4. Powers of t			ellor					37
5. The Senate								37
6. Faculties								39
7. Boards of F	aculties							40
8. Convocation	1							40
4 11.								41
10. Committee								· <b>·</b> ·
at Manch								41
11. Committee	for c	neidar	ing of	viantior	to	nrono	cad	4 I
Statutes :								41
12. Regulation	and Cor	iduct of	t the M	atricula	ttion ex	aminai	lon	42
13. Periods of S	study be	etore G	raduati	on	•••	•••		42
14. Definitions			• • •					43
Students :								
Admission			•••				115,	288
List								394
Regulations							121,	293
Studentships, Assiste	ed, for ]	Feacher	s					366
Surgery, Departmen								5
Classes								321
								297
Degrees Examinations								
Surveying, Classes		• • •	•••	•••		o, <u>305</u> ,		
		• • •			•••	•••	250,	250
Teachers :								
Assisted Studen	tships fo	or						366
Diplomas for								162
Training Classes	s for :							
Elementary		e					232,	226
Experiment							- 32,	~
French			orogy	••••	•••	•••		243
				•••	•••	•••	•••	171
German		•••	•••		•••	•••	• • •	174
Horticultur				•••	•••	•••	• • •	345
Technology, see Scie	ence and	i Techi	iology.					
Terms, University							115,	288
Textile Industries, D	)epartm	ent of :						
Day Classes								259
Diplomas								260
Evening Classes								337
PT11 PT1 1 1								282
Toxicology :					• • •			202
								201
Classes	••	•••	•••	•••	• • •	•••	•••	325
Examinations		••		•••	•••	•••		300
Treasurer, University	y	•••	•••			2	7, 30	, 85
Union, University					***			404
Universities, Recogn	ition of	other						77
o mereroly account								

						Page.	
Vacations, Study during	***	**	***	 		122	
Vaccination, Classes		***		 		331	
Veterinary Science, Classes				 			
Vice-Chancellor	***			 22, 30,	37, 3	9,85	
Victoria University :			1				
Fellows, Scholars, and				 		384	
Honours Lists (Leeds)				 		386	
Recognition of Courses				 		76	
Visitor of the University	ini -			 ***	2	21, 85	
Weaving, Classes			111	 			
Woollen Yarn Manufacture,			111	 ***			
Worsted Yarn Manufacture,	Classe	s	***	 		262	
Yorkshire College :							
Certificates of Proficien						383	
Conferment of Degrees	on for	mer St	udents	 		78	
Zoology (see also Biology):							
Classes						3, 240	
Examinations				 205	, 215	5, 223	

xxxii.

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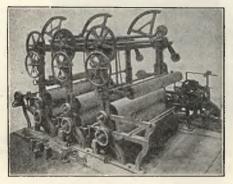
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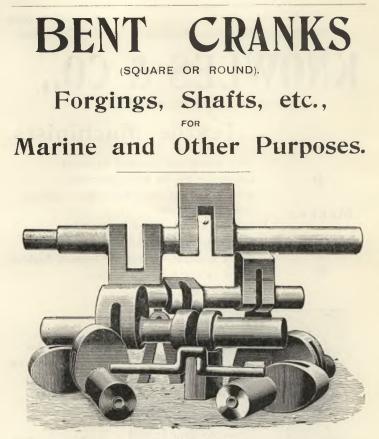


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