

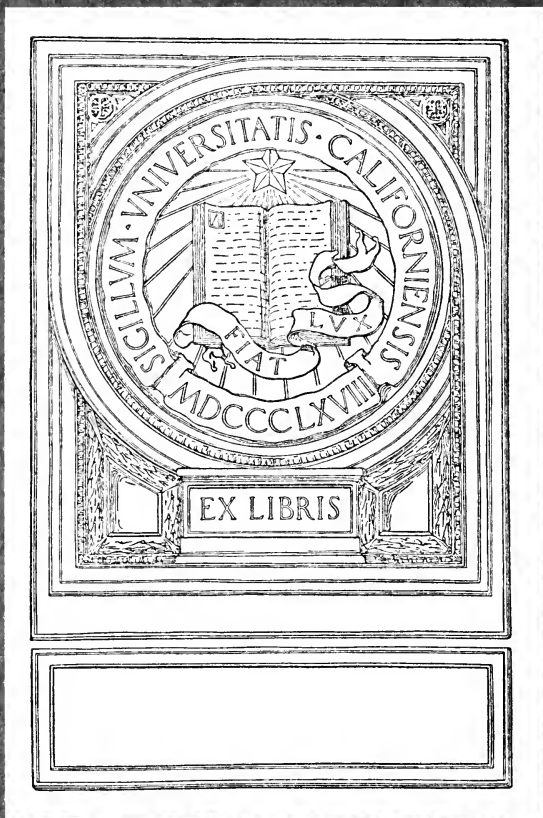
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TWELFTH EDITION.

# Handbook of Information

FOR

## INDIAN STUDENTS

RELATING TO

UNIVERSITY & PROFESSIONAL STUDIES,  
Etc.,

IN THE UNITED KINGDOM.

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Issued by the Committee of the National Indian Association,  
in conjunction with the Advisory Committee, India Office.

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# NATIONAL INDIAN ASSOCIATION.

Founded by MISS CARPENTER in 1871.

## OBJECTS OF THE ASSOCIATION.

To extend a knowledge of India in England, and an interest in the people of that country.

To co-operate with all efforts made for advancing education and social reform in India.

To promote friendly intercourse between English people and the people of India.

## METHODS OF WORKING.

1. Diffusing information on Indian subjects by the publication of a monthly Magazine, and by Lectures.

2. Grants in encouragement of education in India, scholarships, gifts of books to libraries, prizes for schools, &c.

3. Selecting English and Indian teachers for families and schools, and giving friendly help to teachers visiting England.

4. Superintending the education of young Indian students in England.

5. Encouraging the employment of Medical Women in India.

6. Affording information and advice to Indians in England, and aiding them in any objects connected with the aims of the Association.

7. Soirées and occasional excursions to places of interest.

## MEMBERSHIP.

Annual Subscription: Members, One Guinea; Country Members, 10s.; Associates (Indian Students), 5s.; Life Subscription, £10 10s.

Members and Associates are entitled to receive the "Indian Magazine and Review," which is issued monthly. Applications for membership should be made to the Hon. Secretary.

In all the proceedings of the Association the principle of non-interference in religion is strictly maintained.

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Branches in India are required to observe the following conditions, namely:—

1. The adoption of the general principles of the Association, as laid down by these Rules, and action upon those principles.

2. An annual subscription for not less than ten copies of the Magazine of the Association, to be paid in English money to the London Committee.

3. The appointment of regularly constituted Committees of English and Indian gentlemen and ladies, representing as far as possible all sections of the community, which Committees shall hold meetings at stated intervals.

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Branches of the Association collect and distribute their own funds.

The INDIAN MAGAZINE AND REVIEW, Editor, Miss A. A. SMITH, 5, Winchester Road, South Hampstead, N.W., is published monthly at 3s. 6d. per annum, post free, by Mr. J. S. PHILLIPS, 121, Fleet Street, London, E.C.; and it can be procured through Booksellers; or in India through D. B. TARAPORÉVALA AND SONS, Bombay.

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In order to assist parents in India desirous of giving their sons the benefit of an English Education, the Committee are prepared to undertake the superintendence of young Indian Students, during their stay in England, upon certain conditions. The expense in each case will be arranged through private correspondence.

Parents or guardians desirous of placing their sons or wards under the care of the Association, should send an application, accompanied with references, to the Hon. Secretary of the National Indian Association, 168, Kensington Park Road, London, W.

Three months' notice, to date from the receipt of such notice by the Hon. Secretary, is required before a Student is removed from the superintendence of the Committee.

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The compilers of the Handbook beg to express their acknowledgment of the assistance kindly given by Sir Edward Candy, Kt., C.S.I., F. E. Pargiter, Esq., M.A., J. M. Champion, Esq., M.I.C.E., and Professor William R. Smith, M.D., F.R.S.

# HANDBOOK OF INFORMATION FOR INDIAN STUDENTS

RELATING TO

**University and Professional Studies, &c., in the  
United Kingdom.**

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*Issued by the Committee of the National Indian Association, in  
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## **ADVICE TO STUDENTS.**

Committees have been constituted in each Presidency and Province of India (excepting Burma and the North-West Frontier Province) with the object of (1) furnishing information and advice to Indian students who contemplate going to England, (2) circulating in India to Colleges and other Institutions the educational, financial and social information collected by the Central Bureau of Information established in London by the Secretary of State for India, and (3) communicating with the Central Bureau on behalf of students before they start. Students and their parents are therefore advised to take advantage of the facilities thus offered and to communicate with the Secretary of the Provincial Committee before finally settling upon a course of study in England.

Much time is often lost in England if students have not decided on the profession they are to follow, before leaving India.

Students are advised to bring with them letters of introduction, as there are many occasions when such letters will be found useful; and students who intend to join one of the Inns of Court, especially, should bring letters of recommendation to Barristers of five years' standing in London. In every case testimonials of good character should be procured from principals or professors of colleges or other educational authorities.

Several Universities and other educational institutions

require from applicants for admission a birth certificate. Many Indian students in England have been put to great inconvenience for lack of such a certificate, or a corresponding document duly attested by a magistrate or district officer.

It is important that students who have passed any examinations of an Indian University should bring their certificates with them; or, if they proceed to England after passing an examination, but before receiving the certificate, they should bring a letter from the University, or such other evidence as they can procure of having passed the examination.

The following Resolution of the Government of India explains that Indian students proceeding to England should not fail to apply in India for a Certificate of Identity, as such a Certificate is likely to prove very useful to them in many ways.

“RESOLUTION.—The Secretary of State for India has brought to the notice of the Government of India that it not infrequently happens that natives of India, students and others, who have proceeded to England, desire to obtain passports to enable them to travel to foreign countries in which the possession of a passport is necessary or desirable, and that difficulty often arises from a want of evidence to show that the applicant is a British subject and therefore entitled to a passport. Appeals for assistance are also frequently addressed to his Lordship by destitute Indians who desire to return to their country, and by students who, owing to embarrassed circumstances, are unable to complete their course of education.

“In order to enable the Secretary of State to deal with such cases satisfactorily, the Governor-General in Council has decided that it is necessary to press upon Indian students and others visiting England the desirability of providing themselves before their departure from India an authoritative Certificate of Identity (in the form appended to this Resolution) signed by the head of a District (in a Presidency town by the Commissioner of Police), in the case of residents of British India, and by the Political Officer in that of residents of native States. For a student the certificate should be signed by the head of his last school or college and countersigned by the District Officer (in a Presidency town the Commissioner of Police), or Political Officer, as the case may be.”

The want of such a Certificate has often proved disadvantageous to an Indian Student by involving the delay of corres-

pondence with India, and other inconveniences. The required form is easily obtainable in India.

A student should have passed some University Examination in India, beyond mere Matriculation, before coming to this country. He will thus be ready at once to take advantage of the opportunity for professional study here.

Those intending to enter either of the Universities of Oxford or Cambridge are strongly recommended to delay their departure from India until they have passed the examinations in an Indian University that are accepted by Oxford and Cambridge in lieu of Responsions or the Previous, or until they have learned enough Latin to enable them to pass either of these Preliminary Examinations immediately on their arrival in England. Much money and valuable time are often wasted by Indian students who have to spend the first year or more of their residence at Oxford or Cambridge in preparing for these elementary examinations to the neglect of more serious studies.

Students wishing to enter the Universities of either Oxford or Cambridge, and unable to present certificates that exempt them from the Previous or Responsions may take up either (a) Arabic or Sanskrit, or (b) Latin. Students at Cambridge, unless they possess a knowledge of either Sanskrit or Arabic equal to that required for the B.A. examination of an Indian University, are advised not to take either of these languages, as only one opportunity will be given them of appearing in these languages. If Latin is chosen, and the student is unable to study it in India, he is advised to arrive in England in the December of the year preceding the October in which he will commence residence, so that he may pass the University Entrance Examination in September. It should be pointed out that a knowledge of Latin is of great value to students of history and law.

Students intending to enter the University of Oxford or Cambridge should apply for admission to a College at least one year before the term in which they propose to commence residence. The great increase of the number of the students at these two Universities in recent years, and the limited accommodation available for them, expose those who apply late to the risk of disappointment. Many English parents who wish their sons to enter a particular College send in an application as early as two years before the first term of residence. The Tutors of Colleges generally give preference to early applications.

The ideas prevalent in some parts that it is impossible for

a vegetarian to carry out his form of diet in England, and that owing to the colder climate the drinking of alcohol is necessary for the preservation of health, are quite fallacious.

Indian students must not expect to be able to maintain themselves in any degree by means of teaching Eastern languages, or any other subjects during their stay in England.

Students ought to bring with them from India at least £20 or £30 in cash (after paying the expenses of the voyage) for clothes and other necessaries required on arrival in England. They should, if possible, keep throughout their stay a deposit of not less than £30 in the bank to meet cases of accidental delay (which frequently occur in the transmission of remittances), or emergencies such as illness, or circumstances necessitating an immediate return to India.

In addition to College and Class Fees, the student has to spend a considerable sum (in regard to the I.C.S. £30 or £40) on the purchase of books relating to his various studies.

The cost of education in England varies considerably with the University, the social milieu and manner of life of the student, his experience of the world and of the use of money, and the course of study he pursues. A student at Oxford or Cambridge who wishes to take advantage of the social amenities of these Universities requires £300 a year; this sum will cover also the expenses of the vacation. Students of retired habits may manage to live on £250, while Non-Collegiate students can live on somewhat less, but these smaller allowances do not allow of students joining in the characteristic life of these Universities.

A Student may, with economy, live in London on from £120 to £150 a year. This sum is independent of educational and professional tuition, and only includes necessary expenses. In Edinburgh and most other cities of Great Britain the expenses of living are less than in London.

The cost of board and lodging for a student in London depends on the kind of accommodation, and on the locality. There are boarding-houses, where all have meals together at fixed hours, at which the cost is from £1 5s. to £2 2s. a week (for board and lodging). Or a student having an allowance of £200 a year may live with a family, in which case he can gain better acquaintance with English life and habits.

If a student should not be met on landing, the ship's agents will look after his baggage, and, if he comes all the way by sea, he can take the train with the other passengers from the Docks to Fenchurch Street Station, where a cab can be taken, in which he can drive to his destination. Arrange-

ments are equally easy if he arrives at Charing Cross or Victoria Station from Marseilles. It is most important that he should inform some friend in London, by letter or telegram, of the date of his expected arrival. Those who have no friends to meet them and make arrangements for their board and lodging can apply to the Hon. Secretary of the National Indian Association, 168, Kensington Park Road, London, W., or the Educational Adviser to Indian Students, India Office, London, S.W.

## **LEGAL STUDY.**

### **THE BAR.**

#### **INNS OF COURT.**

THERE are four Inns of Court—namely, the Inner Temple, the Middle Temple, Lincoln's Inn, and Gray's Inn—which have the power of calling men to the Bar.

#### **ADMISSION OF STUDENTS.**

Every person not otherwise disqualified who has passed an Entrance Examination at any University within the British Dominions, or the Examination for the Indian Civil Service, etc., is entitled to be admitted as a Student at one of the four Inns of Court, without passing a preliminary Examination.

Other applicants for admission must pass an Examination in the English and Latin languages, and English History. But Indian candidates can obtain an exemption from the Examination in Latin on applying for the same.

Proficiency in English is tested by the Candidates' answers in History, the leading outlines of which only are required.

Preliminary Examinations are held in the week preceding each term, and every succeeding week during term.

A Declaration in a certain form must be made on application for admission as a Student, and the applicant must obtain two separate Certificates, each to be signed by a Barrister in England of five years' standing, stating that he is believed to be a proper person to be called to the Bar.

#### **CALL TO THE BAR.**

Every student must be twenty-one years of age before being called to the Bar.

The Student must keep twelve terms before he can be called to the Bar, unless any term or terms (not exceeding two) have been dispensed with under special circumstances by the Benchers of the Inn. There are four terms a year, and a term

is kept by attending (without the necessity of eating) six, or in the case of a member of a British or Irish University, three dinners in the Hall of the Inn. The terms are as follows :— Michaelmas term, November 2—25 ; Hilary term, January 11—31 ; Easter term, four weeks, commencing the Tuesday after Easter Tuesday ; Trinity term, three weeks, commencing the Tuesday after Whit Tuesday. It is not necessary to keep all the terms consecutively. A saving of about four months' residence in England can be effected by those who are admitted in November and who keep the Michaelmas term.

The Student must have passed, to the satisfaction of the Council of Legal Education, a Public Examination for the purpose of ascertaining his fitness to be called to the Bar, and have obtained from the Council a Certificate of having passed such Examination.

Four such Examinations are held each year, one shortly before each term.

The Bar Examination consists of two parts:—PART I.— 1. Roman Law and Jurisprudence and International Law, Public and Private (Conflict of Laws). 2. Constitutional Law (English and Colonial) and Legal History. 3 (A). Criminal Law and Procedure. 3 (B). Real Property and Conveyancing, or Hindu and Mahomedan Law, or Roman-Dutch Law. PART II. FINAL EXAMINATION.—(A) Common Law. (B) Equity. (C) Law of Evidence and Civil Procedure. (D) A General Paper on all the above subjects.

No Student will receive a Certificate of fitness for Call to the Bar unless he passes a satisfactory Examination in the above subjects.

A Student may present himself for Examination in all or any of the Subjects 1, 2, 3 (A) and 3 (B) at any time after admission. Without the special leave of the Council no student shall present himself at the Final Examination unless he has kept six terms.

The Council accept as an equivalent for the Examination in Roman Law a Degree granted by any University within the British Dominions, for which the qualifying Examination included Roman Law ; or a Certificate that any Student has passed any such Examinations.

#### FEES.

The fees connected with a Call to the Bar amount to nearly £150 ; but the sum of £90 must be paid at admission, and the remainder at the date of call. At the Inner Temple an extra deposit of £50 is required.



The fees of the various Inns are shown in detail below :—

Payments on admission, including admission and lecture fees and deposit. (The deposit is returnable, without interest, on call, death or withdrawal).		Stamps, interest,	Payments on call, including Stamp, call fees, composition for Bar dues, etc.	Total.						
	£	s.	d.	£	s.	d.				
Inner Temple	140	16	3	(of which £100 is deposit) ..	99	10	0	140	6	3
Lincoln's Inn	90	0	0	(of which £50 is deposit) ..	94	0	0	134	0	0
Middle Temple	90	6	3	(of which £50 is deposit) ..	99	10	0	139	16	3
Gray's Inn	88	12	6	(of which £50 is deposit) ..	89	2	4	127	14	10

Inner Temple Commons charged at £1 2s. each term kept. Dues amount to 6s. 3d. a term.

Lincoln's Inn Commons (including gowns), £1 2s. 6d. each term ; dues, 5s. a term.

The Middle Temple Annual Duty, £1 ; Commons, 2s. a dinner ; fee for keeping term, 10s.

Gray's Inn dinners, 3s. 6d. each, and Admission Form, £1 1s.

There are several prizes and scholarships at Gray's Inn.

Students from India should provide themselves with a certificate of birth, and a certificate from some person in an official position saying that they are proper persons to be admitted to the Bar.

The Indian High Courts require, before an Indian Barrister can be enrolled, that he should present a certificate of moral character, signed in England by a Judge or by two Barristers of over five years' standing.

Many Barristers undertake to give private tuition in preparing for the Examinations, the fees varying with the amount of tuition required.

### THE SOLICITORS' EXAMINATION.

To become a Solicitor it is necessary first to serve under Articles to a Solicitor for five years, and to pass three Examinations of the Law Society. One, "Preliminary," before being articulated ; the second, "Intermediate," for which candidates may appear after 12 months' service under Articles of Clerkship ; the third, the "Final" one, before being admitted. A person who has graduated at any University in England, Scotland, or Ireland, or who has been called to the English Bar, is only required to serve under Articles for three years.

The PRELIMINARY EXAMINATION (fee, £4) is in—1. Writing from Dictation. 2. Writing a short English Composition. 3 (a.) Arithmetic. (b.) Algebra, up to and inclusive of Simple Equations, and the first four books of Euclid. 4. Geography of Europe, and History of England. 5. Latin. 6. Any two languages, to be selected by the Candidate out of the following six—namely (a) Latin, (b) Greek, (c) French, (d) German, (e) Spanish, (f) Italian.

With reference to the subjects numbered 3 and 6, no Candidate is obliged to take up Algebra, or Euclid (No. 3b), but if any Candidate elects to do so, he may take up these with *one* only of the languages. (No. 6).

Four of these Examinations are held in each year, in the months of February, May, July and October. Persons are exempted from the Preliminary Examinations who have passed certain University or other Public Examinations.

INTERMEDIATE EXAMINATION (fee, £6). Four of these Examinations are held in each year, in the months of January, April, June, and November. The subjects are such elementary works on the Laws of England as the Examination Committee may from time to time appoint for that purpose, and an Examination on Accounts and Bookkeeping. A Barrister of not less than five years' standing is exempted from all Examinations except the Final.

FINAL EXAMINATION (fee, £10). Four of these Examinations are held in each year, in the months of January, April, June, and November, in the following subjects:—

1. The Principles of the Law of Real and Personal Property and the Practice of Conveyancing.

2. The Principles of Law and Procedure in matters usually determined or administered in the Chancery Division of the High Court of Justice.

3. The Principles of Law and Procedure in matters usually determined or administered in the King's Bench Division of the High Court of Justice, and the Law and Practice of Bankruptcy.

4. The Principles of Law and Procedure in matters usually determined or administered in the Probate, Divorce, and Admiralty Division of the High Court of Justice; Ecclesiastical and Criminal Law and Practice; and Proceedings before Justices of the Peace.

There is also an Examination for Honours (fee, £1).

The fee payable to the Solicitor to whom a clerk is articulated varies much with the circumstances of each case. In good offices the fee payable is £315 (300 guineas) for

instruction during the five, four, or three years, as the case may be; and this fee is paid when the articles are signed. The clerk has to lodge, clothe, and feed himself. There is a stamp duty of £80 upon the articles, and there are fees of £30 5s. to be paid on admission after the Final Examination. A subscription of £2 a year entitles clerks of Members to the use of the Library of the Law Society. They can also attend Lectures and Classes delivered and held at the Incorporated Law Society. The composition fee for a complete curriculum of oral Lectures and Classes for the Intermediate is £3 15s., and for the Final £5 10s.

For further information apply to the Secretary, Law Society's Hall, Chancery Lane, London, W.C.

## **GOVERNMENT SERVICES.**

### EXAMINATIONS FOR THE CIVIL SERVICE OF INDIA.

#### REGULATIONS.

1. An Examination for admission to the Civil Service of India, open to all qualified persons, will be held in London in August of each year. The date of the Examination and the number of appointments to be made for each Province will be announced beforehand by the Civil Service Commissioners.

2. No person will be deemed qualified who shall not satisfy the Civil Service Commissioners :—

(i.) That he is a natural-born subject of His Majesty.

(ii.) That he had attained the age of twenty-two and had not attained the age of twenty-four on the first day of August of the year in which the Examination is held.

[N.B.—In the case of natives of India it will be necessary for a Candidate to obtain a certificate of age and nationality signed, should he be a resident in British India, by the Secretary to Government of the Province, or the Commissioner of the Division within which his family resides, or should he reside in a Native State, by the highest Political Officer accredited to the State in which his family resides.]

(iii.) That he has no disease, constitutional affection, or bodily infirmity unfitting him, or likely to unfit him, for the Civil Service of India.

(iv.) That he is of good moral character.

3. Should the evidence upon the above points be *prima facie* satisfactory to the Civil Service Commissioners, the Candidate, on payment of the prescribed fee, will be admitted to the Examination. The Commissioners may, however, in their discretion, at any time prior to the grant of the Certificate of Qualification hereinafter referred to, institute such further enquiries as they may deem necessary; and if the result of such enquiries, in the case of any Candidate, should be unsatisfactory to them in any of the above respects, he will be ineligible for admission to the Civil Service of India, and if already selected, will be removed from the position of a probationer.

4. The Open Competitive Examination will take place only in the following branches of knowledge :—

	Maximum Marks.
English Composition .. .. .	500
Sanskrit Language and Literature .. .. .	600
Arabic Language and Literature .. .. .	600
Greek, not less than two sub-divisions, of which one must be Translation :—	
Translation .. .. .	300
Composition .. .. .	300
Literature, etc. .. .. .	300
Latin, not less than two sub-divisions, of which one must be Translation :—	
Translation .. .. .	300
Composition .. .. .	300
Literature .. .. .	300
English Language and Literature .. .. .	600
Italian Language and Literature .. .. .	600
French Language and Literature .. .. .	600
German Language and Literature .. .. .	600
Lower Mathematics .. .. .	1,200
Higher Mathematics .. .. .	1,200
Natural Science, i.e., any number not exceeding <i>four</i> of the following subjects :—	
Chemistry .. .. .	600
Physics .. .. .	600
Geology .. .. .	600
Botany .. .. .	600

	Maximum Marks.
Zoology .. .. .	600
Animal Physiology .. .. .	600
Geography .. .. .	600
Greek History (Ancient, including Constitution) ..	500
Roman History (Ancient, including Constitution) ..	500
English History, either or both sections may be taken :—	
I. to A.D. 1485 .. .. .	400
II. A.D. 1485 to 1848 .. .. .	400
General Modern History .. .. .	500
Logic and Psychology .. .. .	600
Moral and Metaphysical Philosophy .. .. .	600
Political Economy and Economic History .. .. .	600
Political Science .. .. .	500
Roman Law .. .. .	500
English Law .. .. .	500

Candidates are at liberty to name any or all these branches of knowledge, provided that the maximum number of marks that can be obtained from the subjects chosen is limited to 6,000. None is obligatory.

5. The merit of the persons examined will be estimated by marks ; and the number set opposite to each branch in the preceding regulation denotes the greatest number of marks that can be obtained in respect of it. Considerable deductions will be made for bad handwriting.

6. The marks assigned to Candidates in each branch will be subject to such deduction as the Civil Service Commissioners may deem necessary in order to secure that no credit be allowed for merely superficial knowledge.

7. The Examination will be conducted on paper and *viva voce*, as may be deemed necessary.

8. The marks obtained by each Candidate, in respect of each of the branches in which he shall have been examined, will be added up, and the names of the several Candidates who shall have obtained, after the deduction above-mentioned, a greater aggregate number of marks than any of the remaining Candidates, will be set forth in order of merit, and such Candidates shall be deemed to be selected Candidates for the Civil Service of India, provided they appear to be in other respects duly qualified. Should any of the selected Candidates become disqualified, the Secretary of State for India will determine whether the vacancy thus created shall be filled up or not. In the former case, the Candidate next in

order of merit, and in other respects duly qualified, shall be deemed to be a selected Candidate.

9. Selected Candidates, before proceeding to India, will be on probation for one year, at the end of which time they will be examined, with a view of testing their progress in the following subjects :—

COMPULSORY—

	Marks.
1. Indian Penal Code .. .. .	400
2. Code of Criminal Procedure .. .. .	200
3. The Indian Evidence Act .. .. .	200
4. Indian History .. .. .	400
5. The principal Vernacular Language of the Province to which the Candidate is assigned .. .. .	400

OPTIONAL. [Not more than one of the following.]

	Marks.
1. Hindu and Muhammadan Law .. .. .	450
2. Sanskrit* .. .. .	400
3. Arabic* .. .. .	400
4. Persian .. .. .	400
5. Hindustani (for Candidates assigned to the Province of Burma only) .. .. .	400

\* These subjects may not be offered by any Candidate who has offered them at the Open Competition.

In this Examination, as in the Open Competition, the merit of the Candidates examined will be estimated by marks (which will be subject to deductions in the same way as the marks assigned at the Open Competition), and the number set opposite to each subject denotes the greatest number of marks that can be obtained in respect of it. The Examination will be conducted on paper and *viva voce*, as may be deemed necessary. This Examination will be held at the close of the year of probation, and will be called the "FINAL EXAMINATION."

10. The Selected Candidates will also be tested during their probation as to their proficiency in Riding.

11. The Selected Candidates who, on examination, shall be found to have a competent knowledge of the subjects specified in Regulation 9, and who shall have satisfied the Civil Service Commissioners of their eligibility in respect of nationality, age, health, character, conduct during the period of probation, and ability to ride, shall be certified by the said Commissioners to be entitled to be appointed to the Civil Service of India, provided they shall comply with the regulations in force, at the time, for that Service.

12. Persons desirous to be admitted as Candidates, must

apply on Forms, which may be obtained from "The Secretary, Civil Service Commission, London, S.W.," at any time after the 1st December in the year previous to that in which the Examination is to be held. The Form, filled in in the handwriting of the Candidate, must be returned so as to be received at the office of the Civil Service Commissioners on or before the 1st July (or, if that date should fall upon a Sunday or public holiday, then, on or before the first day thereafter on which their office is open), in the year in which the Examination is to be held.

### THE INDIAN MEDICAL SERVICE.

#### REGULATIONS FOR THE EXAMINATION OF CANDIDATES FOR ADMISSION TO HIS MAJESTY'S INDIAN MEDICAL SERVICE.

1. The Regulations are those in force at the present time. They are subject to any alterations that may be determined on.

2. Candidates must be natural-born subjects of His Majesty, between twenty-one and twenty-eight years of age at the date of the Examination, of sound bodily health, and in the opinion of the Secretary of State for India in Council in all respects suitable to hold commissions in the Indian Medical Service. They may be married or unmarried. They must possess under the Medical Acts in force at the time of their appointment a qualification registrable in Great Britain and Ireland.

3. They must sign and send in to the Military Secretary, India Office, Westminster, *so as to reach that address by the date fixed in the advertisement of the Examination*, a declaration according to a prescribed form.

4. This declaration must be accompanied by the following documents :—

(a) *Proof of Age*, either by Registrar-General's certificate, or, where such certificate is unattainable, by the Candidate's own statutory declaration, forms for which can be obtained at the India Office, supported, if required by the Secretary of State, by such evidence as he may consider satisfactory. A certificate of baptism which does not afford proof of age will be useless.

(b) A recommendation from some person of standing in society—not a member of his own family—to the effect that he is of regular and steady habits, and likely in every respect to prove creditable to the Service if admitted; and a certificate of moral character from a Magistrate or a minister of the religious denomination to which the Candidate belongs.

(c) A certificate of having attended a course of instruction for not less than three months at an ophthalmic hospital, or the ophthalmic department of a general hospital, which course shall include instruction in the errors of Refraction.

(d) Some evidence of having obtained a registrable qualification.

Natives of India and those educated in that country must also produce a certificate, signed by the Director-General, Indian Medical Service, that the Candidate is a suitable person to hold a commission in the Service.

5. The Secretary of State for India reserves the right of deciding whether the Candidate may be allowed to compete for a commission in His Majesty's Indian Medical Service.

6. The physical fitness of each Candidate will be determined by a Board of Medical Officers, who are required to certify that his vision is sufficiently good to enable him to pass the tests laid down by the Regulations.

Every Candidate must also be free from all organic weakness, or other disability likely to unfit him for military service in India.

7. On proving possession of the foregoing qualifications, the Candidate will be examined by the Examining Board in the following subjects, and the highest number of marks attainable will be distributed as follows :—

	Marks.
Medicine (including Therapeutics) .. ..	1,200
Surgery (including diseases of the eye) ..	1,200
Applied Anatomy and Physiology .. ..	600
Pathology and Bacteriology .. ..	900
Midwifery and Diseases of Women and Children .. ..	600
Materia Medica Pharmacology and Toxicology	600

N.B.—The examination in medicine and surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside.

Candidates to qualify, must obtain at least ONE-THIRD of the total number of marks obtainable in each subject, and ONE-HALF of the aggregate marks for all the subjects.

8. After passing this Examination, the successful Candidates will be required to attend two successive courses of two months each at Aldershot, and at the Royal Army Medical College, Millbank. The Course at Aldershot will include (1) Internal Economy, (2) Indian Military Law, (3) Hospital



Administration, (4) Stretcher and Ambulance Drill, (5) Equitation, (6) Map Reading.

The Course at the Royal Medical College will include (1) Hygiene, (2) Military and Tropical Medicine, (3) Military Surgery, (4) Pathology of diseases and injuries incidental to Military and Tropical Service.

9. The Candidate's commission as Lieutenant will bear the date on which the result of the Examination is announced, but his rank will not be gazetted until he has passed the final Examination.

10. During this period of instruction each Candidate will receive an allowance of 14s. per diem, with quarters, or, when quarters are not provided, with the usual allowances of a subaltern in lieu thereof, to cover all costs of maintenance; and he will be required to provide himself with uniform.

11. Candidates will be required to conform to such rules of discipline as may from time to time be laid down.

12. At the conclusion of the course, Candidates will be required to pass an examination in the subjects taught during the course of instruction. A lieutenant who, within a reasonable period before the date at which he would otherwise sail for India, furnishes proof of his election to a resident appointment at a recognised civil hospital, may be seconded for a period not exceeding one year from the date on which he takes up such appointment, provided that he joins it within three months of passing his Final Examination and that he holds himself in readiness to sail for India within fourteen days of the termination of the appointment. While seconded he will receive no pay from Indian Funds, but his service towards promotion, increase of pay, and pension will reckon from the date borne on his commission. Before the commission of a lieutenant-on-probation is confirmed he must be registered under the Medical Acts in force at the time of his appointment.

13. Officers appointed to the Indian Medical Service will be placed on one list, their position on it being determined by the combined results of the Preliminary and Final Examinations. They will be liable for military employment in any part of India, but with a view to future transfers to civil employment they will be allowed a choice according to their positions on the list between the following civil areas: Madras and Burma, Bombay with Aden; Upper Provinces (United Provinces, Punjab and Central Provinces); Lower Provinces (Bengal and Eastern Bengal and Assam). An officer transferred to civil employment, though ordinarily employed within the area of

his choice, will remain liable to employment elsewhere if the exigencies of the service require it.

Examinations for admission to the Service usually take place twice in the year—*i.e.*, in January and July.

Candidates will be supplied, on application, with copies of the papers set at the last examination preceding.

## INDIAN PUBLIC WORKS DEPARTMENT.

### APPOINTMENT OF ASSISTANT ENGINEERS.

Natives of India are eligible under the regulations issued from year to year by the Secretary of State, for appointments in the Public Works Department made in England, provided that the total number of Indians so nominated shall not in any one year exceed 10 per cent. of the total number of Engineers appointed.

Appointments are made with the advice of a Selection Committee, including at least one eminent representative of the Engineering profession.

Candidates must have attained the age of 21 and not attained the age of 24 years on the 1st July of the year of appointment, and must be of good moral character and sound physique.

Candidates must have obtained a Degree in Engineering in one of the British Universities, or such diploma or other distinction as may, in the opinion of the Selection Committee, be equivalent to such a degree.

It is essential that a candidate should have had some experience as assistant in the preparation of the designs for, or in the execution of, some engineering work of importance.

After being provisionally nominated by the Selection Committee, he will be required, before final appointment by the Secretary of State in Council, to appear before the Medical Board at the India Office for Examination as to his physical fitness for service in India.

Candidates will also be required, before final appointment, to satisfy the Secretary of State in such manner as he may determine, of their ability to ride.

The subjects which are held to be of most importance for the Public Works Service are :—

Pure Mathematics, including a knowledge of the differential and integral calculus ; Applied Mathematics, Geometrical and Engineering Drawing, Surveying and Geodesy, Strength of Materials and Theory of Structures, Hydraulics, Heat Engines, Materials used in Construction, Building Construction, com-

prising Wood and Metal Work, Limes and Cements, and Building with Stone, Brick, and Concrete ; knowledge of the Principles of Road-making, Waterworks, Sanitary and Railway Engineering (important).

Candidates should also have had some workshop training.

### INDIAN FOREST SERVICE.

Candidates applying for appointment as Probationers must be natural-born British subjects, and must be under 23 years of age, unmarried, of good physique and of good character.

Probationers are appointed by the Secretary of State, on the advice of a Selection Committee. Candidates must bring evidence, for the consideration of the Selection Committee, to show that they have passed with honours in a public examination for a degree in some branch of Natural Science, held by a University in Great Britain or Ireland, and that they possess a knowledge of Mathematics up to and including Plane Trigonometry. Special consideration will be given to candidates who possess a Diploma in Forestry granted by a British University.

In case the number of such candidates is not sufficient to fill the number of appointments, candidates will be nominated who bring evidence to show that they have received a good general education (including English, Mathematics, Latin, and either German or French) and have a good knowledge of Chemistry and Mechanics and Physics. The production of school certificates, or certificates that the candidate has passed the Matriculation Examination of a University in the subjects named, will be sufficient to satisfy the requirements of this clause. Such candidates must not be less than 19 years of age.

Should there be more qualified candidates than vacancies to be filled, the final selection may be made by competitive examination.

In the Medical Examination particular stress is laid on good vision and hearing.

The period of probation for Probationers who have passed with Honours in Natural Science will be two years ; for those who have obtained a Diploma in Forestry two years or less ; for others about three years. Probationers will be required to undergo a special course of study at Oxford, to become members of the University and to obtain the Diploma of Forestry of that University. During vacations

they will receive practical instruction in British or Continental forests.

Probationers will be required to defray expenses while at Oxford, and on practical instruction in Britain or on the Continent, with the exception of fees payable to local forest officers. The Secretary of State makes a total allowance to each probationer of £240, subject to satisfactory progress and to security to refund the payments in case he does not join the Indian Forest Service.

Successful probationers are appointed Assistant Conservators in the Indian Forest Department at Rs. 380 a month. They are required to be able to ride.

For further information apply to the India Office for a copy of the Regulations.

### **AGRICULTURE, &c.**

Instruction in Agricultural and Horticultural subjects, dairy farming, &c., is given by a large number of institutions.

#### **CAMBRIDGE.**

The course at Cambridge is particularly suitable from the scientific point of view for students who have had a previous science training not lower than the B.Sc. of Bombay. The fees (which depend upon the particular College which the Student wishes to join) vary from £150 to £200 per annum. For students who do not join the University and are willing to live plainly, it is officially stated that the cost need not exceed £60, which includes 24 weeks' board and residence with fees.

Two courses of study are open to the Student of Agriculture—(1) a course leading up to the B.A. degree, extending over three years; (2) a course leading up to the Diploma in Agriculture, extending over a fourth year, or, in certain circumstances, a degree and a diploma may be taken in three years. The full course for the diploma alone extends over two years.

A somewhat less expensive education is given at

#### **UNIVERSITY COLLEGE OF WALES, ABERYSTWYTH.**

The degree courses, qualifying for the degree of B.Sc. of the University of Wales, extend over three years (nine terms). The diploma course qualifying for the College diploma in Agriculture, also extends over three years, but the students attend classes only during the winter months (making six terms in all) and the remainder of the time (two

periods of 24 weeks each) must be devoted to practical work on an approved farm under the supervision of the lecturer.

An advanced course in agricultural chemistry, consisting mainly of practical work, is provided for those who wish to make a special study of the subject after having taken the degree or diploma.

External work includes field demonstrations, dairying, and work on the experimental farm in connection with the College.

Similar courses are given at the University of Leeds, the University College of North Wales, Bangor, and the Armstrong College, Newcastle.

Besides these Universities, there are several Agricultural Colleges which give a Diploma in Agriculture to students who have attended courses extending over two or three years.

#### THE ROYAL AGRICULTURAL COLLEGE, CIRENCESTER,

provides an education well suited to the needs of Indian students. The object of this Institution is, by means of a combination of College and Farm, to provide such a course of special instruction, both scientific and practical, as shall be most useful to an intending Agriculturist, and suitable to any of the following classes:—(1) Land Owners; (2) Farmers and Occupiers of Land; (3) Land Agents, Surveyors, &c.; (4) Administrators and Inspectors; (5) Professors, Lecturers, and Teachers of Agriculture; (6) Intending Colonists, &c., &c.

The Workshops, Veterinary Hospital, Museum, Laboratory, together with the comprehensive teaching on Agriculture, Stock, Dairying, &c., &c., afford an exceptionally valuable training for intending Colonists.

In-students all lodge and board in the College. They are admitted at the ages of about 17 to 21 years, or upwards. Out-students are admitted at 20 or 21 years of age and upwards. They lodge and board in the town, in houses licensed by the College.

Fees and Payments, payable terminally in advance:—In-students, £45 per term; Out-students, £25 per term. Entrance for Out-students, £5.

The ordinary course occupies two years, of three terms each; and that for the Diploma, two years and one or two extra terms. There is a special one year's course of three terms, better taken in four terms, completing Agriculture, Veterinary or Chemistry, Surveying, Levelling, &c., with

portions of Estate Management, Forestry, &c. At least three subjects must be taken.

There is no entrance examination. A good general education is the best preparation for entering the College.

A similar institution, at which the expenses of residence are somewhat less, is

#### HARPER ADAMS AGRICULTURAL COLLEGE, NEWPORT, SALOP.

The courses of instruction provided at the College are :— (1) the Diploma course, extending over two years and covering the ground of the National Diploma in Agriculture examinations, and (2) the Certificate course, extending over two years, of a less advanced character, and intended to provide a training in practical Agriculture, and (3) short courses of eight weeks during the autumn and spring terms.

External work includes field demonstrations, dairying, and work on the College farm.

Other Institutions of much the same character are University College, Reading; the Midland Agricultural and Dairy College, Kingston; the College of Agriculture and Horticulture, Holmes Chapel; the Agricultural and Horticultural College, Uckfield; and the Agricultural College, Aspatria. Cumberland.

## UNIVERSITIES.

### THE UNIVERSITY OF OXFORD.

#### DEGREES.

The University of Oxford grants Degrees in Five Faculties—viz., in Arts, Music, Law, Medicine (including the Sub-Faculty of Surgery), and Divinity; and also Degrees in Literature and Diplomas in other subjects. The attainment of a Degree in Arts is essential before entering either of the two Faculties of Law and Medicine.

The following are the main conditions to attainment of the Bachelor of Arts (B.A.) Degree :—

#### RESIDENCE AND MATRICULATION.

The Academical year is divided into four terms—Michaelmas Term, the first of the Academical year, beginning about the middle of October; Hilary (or Lent) Term, beginning about the middle of January; Easter and Trinity Terms (which are practically one), beginning about the middle of April. Terms occupy about half the year. Students, except affiliated Students and Members of certain Universities (as to which see later) must keep twelve Terms, not necessarily consecutive, by residence, before attaining the Degree of Bachelor of Arts.

Residence at Oxford during the Vacation is only allowed by special permission.

Anyone who wishes to be matriculated as a Member of the University must first be admitted either as a Member of a College or Hall, or as a Non-Collegiate Student. Those who join a College are ordinarily required to pass an entrance examination conducted by the College authorities. The nature of the Examination varies ; but in all cases the Student must satisfy the College that he is likely, within a reasonable period, to pass Responsions. Non-Collegiate Students are also required to pass an Examination.

Anyone whose name has been placed on the books of a College or Hall, or of the Delegacy of Non-Collegiate Students, is eligible to be presented to the Vice-Chancellor for formal enrolment on the Register of the University. This enrolment is Matriculation. There is no University Examination for Matriculation.

#### EXAMINATIONS.

Examinations in Arts, more usually called " Schools," are sharply divided into Pass and Honours Examinations. In the former there is but one standard ; in the latter the names of Candidates who satisfy the Examiners are distributed into three or four Classes, according to merit.

The attainment of the B.A. Degree, as above stated, is a condition precedent to the attainment of degrees in Medicine, Divinity, and, in ordinary cases, Law. A large amount of choice is allowed in regard to the subjects, the time and the order of the several Examinations required. In ordinary cases, the following Examinations suffice :—

1. Responsions. It is now possible to pass this Examination before going into residence. In many Colleges that is compulsory. But, in any case, those who intend to try for Honours should be prepared to pass Responsions in their first Term. The subjects for Responsions are : (1) Stated subjects ; (2) Additional subjects. The stated subjects are : Arithmetic, Algebra or Geometry, Greek and Latin Grammar, Translation, from English into Latin Prose, Greek and Latin authors, chosen from a prescribed list.

The Additional Subjects are only required from those Candidates who wish to obtain exemption from the Classical part of the second Examination. They are, a Greek or Latin, French, German, or Italian author, Bacon's " *Novum Organum*," Book I., and the Elements of Logic. One subject only is required.

Indian Candidates are allowed to offer in Responsions as substitutes for Greek and Latin (A) English for one of these languages, (B) either Sanskrit, Arabic, Persian or Pali for the other.

2. The Examination in Holy Scripture or in a substituted book. An Indian student may substitute any one of certain specified books in Sanskrit, Arabic, Pali, or English.

3. An Intermediate Examination. This may be either (A) a Pass Examination in Latin, Greek and either Elementary Mathematics or Logic; or (B) an Honour Examination in Latin and Greek; or (C) an Honour Examination in Mathematics; or (D) Jurisprudence Preliminary Examination; or (E) the Natural Science Preliminary Examinations.

Of these, (D) and (E) are for those only who have passed in an Additional Subject at Responsions, and intend to take Honours in a Final Honour School. An Indian Student who takes (A) may substitute for Greek and Latin (1) English for one of these languages, (2) either Sanskrit, Arabic, Persian or Pali for the other.

4. A Final Examination. This may be either the Pass School of the Second Public Examination, or one of nine Honour Schools.

The Pass School subjects are arranged in five groups, a, b, c, d, e; out of which Candidates must satisfy the Examiners in three subjects, not more than two subjects being taken from any one group. (a) contains Classical subjects (including Sanskrit, Pali and Persian); (b) contains Modern subjects—one of which is Political Economy, and another a Branch of Legal Study, either the Principles of the English Law of Contracts, or the "Institutes" of Justinian, or Mayne's "Treatise on Hindu Law and Usage," or Military Law. c, Geometry, Mechanics, &c. d, Elements of Religious Knowledge. e, Military subjects.

The nine Final Honour Schools are those of Literæ Humaniores, Mathematics, Natural Science, Jurisprudence, Modern History, Theology, Oriental Studies (including Sanskrit, Persian, or Arabic, History of India, and one special subject, legal or philological), English Language and Literature, and Modern Languages.

It is not advisable for an Indian Student to enter at Oxford until he has passed, or is ready to pass, Responsions. If he knows Sanskrit when he leaves India, he can, with diligence, learn enough Latin to pass Responsions in six months.

An Indian Candidate may obtain a degree without being required to learn either Greek or Latin.

The Examination for the Degree of Bachelor of Civil Law



includes the Indian Penal Code, and the Hindu and Muhamadan Law of the Family, Family Property, and Inheritance. As stated above, ordinary Candidates cannot attain this Degree unless they have first been admitted to the B.A. Degree.

But a Student who has attained the age of 21 years, and is a Graduate in Arts (or in Philosophy, or in Science) of some other University, may, if he obtains the permission of the Board of the Faculty of Law, commence reading at once for the B.C.L. Examination, and take that Examination at the end of either his second or his third year. If he obtains Honours in the Examination, he may then proceed to the degree of B.C.L. provided he has kept residence for eight Terms (two years).

INDIAN CIVIL SERVICE CANDIDATES.—The Open Competitive Examination embraces nearly all the subjects of the Honour Schools of the University of Oxford, and anyone who is not twenty years of age on the 1st of August of the year in which he matriculates (in October) may give four years to an Honour Course, and immediately after taking his degree, enter for the Competitive Examination. But, as some special preparation at a tutor's for the Competitive Examination is often desirable, the University curriculum can be abridged so as to allow a year for special training.

BODEN SANSKRIT SCHOLARSHIPS.—These are four in number, and one is available every Hilary Term, after an Examination in Sanskrit. The emoluments are £50 per annum for four years. Candidates must be matriculated members of a College or Hall, who on the day of election have not exceeded their twenty-fifth year, subject to certain qualifications regarding their study of Sanskrit.

THE INDIAN INSTITUTE.—The main object of this Institute, founded in 1883, is to give effective teaching and to form a centre of interest in all subjects that relate to India. The Institute is intended to assist the Selected Candidate for the Indian Civil Service, and all Indian Students who matriculate or merely reside at Oxford. It also serves as a meeting-place for Students of all countries who are engaged in Oriental research. It includes Lecture-rooms, a Reading-room, a Library, and a Museum.

#### EXPENSES.

##### I.—PAYMENT TO THE UNIVERSITY.

Fee for Matriculation	£3	10	0
Examinations, about	8	0	0
Degree of Bachelor of Arts	7	10	0

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£19 0 0

## II.—COST OF INSTRUCTION.

The tuition fees vary somewhat at the different Colleges, but are usually under £25 annually. For Non-Collegiate Students the tuition fees are £6 6s. annually. Students from India often require further tuition than the Colleges provide. In such cases, the Student should, before selecting a tutor, ask the advice of his College tutor, or of the Censor of Non-Collegiate Students. The fee for a private tutor is 20 guineas for eight weeks for an hour's lecture on six days of the week, or 10 guineas for the same on three days.

## III.—LIVING EXPENSES.

The cost of living at Oxford varies so largely with the means, tastes, and moral courage of a Student, that it is not possible to lay down many general propositions respecting it. There are certain inevitable expenses, such as board and lodging, which vary in different Colleges, and in all are greater than in the case of Non-Collegiate Students; others, which are desirable but voluntary, as subscriptions to Clubs and Societies; others, as tradesmen's bills, which are almost wholly within a Student's powers to fix for himself. Clothes, books, railway fares, and the cost of living in the vacations have to be taken into account. In order to obtain the collateral advantages of University life, a Student ought to have £250 or £300 a year.

The expenses connected with rooms, rent, attendance, meals, &c., are nearly the same at Oxford as at Cambridge.

Members of the Universities of Calcutta, Bombay, Madras, the Punjab, and Allahabad, who have fulfilled certain conditions there, are entitled to certain privileges at Oxford. If they have completed a course of two years, and have passed the Entrance (or Matriculation) and the First Arts (or Intermediate) Examinations they are classed as "Junior" Indian Students. If they have completed a course of three years and have obtained Honours of a sufficient standard in the Final (B.A. or M.A.) Examination they are classed as "Senior" Indian Students.\* The standard of Honours required has been laid down for each of the five Universities separately, and a Student must be careful to ascertain what it is in his case. A Junior Indian Student can reckon his first Term of Residence as the fifth from his Matriculation, *i.e.*, he is granted one year's standing. He is not required to pass Responsions or in an Additional subject. He can take the degree of B.A. after a residence of eight Terms, *i.e.*, two Academical years, if he has passed the Second Public Examination and has obtained Honours in either the First or Second

Public Examination. If he has only taken a Pass in both these Examinations, he cannot take his Degree till he has resided Twelve Terms.

The privileges and status of a Senior Indian Student are as follows:—He can count his First Term of residence as the fifth from his Matriculation. He is not required to pass Responsions, the First Public Examination, or any Preliminary of the Second Public Examination. If he obtains Honours in any Final School, he can take his B.A. Degree after eight Terms' residence.

(Very full particulars on all subjects connected with the University can be obtained from the "Students' Handbook," of which revised editions are frequently issued by the Clarendon Press, Oxford. Price 2s. 6d. or 2s. 9d. post free.)

**\*STANDARD OF HONOURS REQUIRED FOR "SENIOR" INDIAN STUDENTS.**

**UNIVERSITY OF ALLAHABAD.**—Any member of the University of Allahabad who either shall have been placed in the First or the Second Division in the Examination of that University for the Degree of Bachelor of Arts and also in the First or the Second Division in the Examination for the Degree of Master of Arts, or shall have been placed in the First Division in the Examination for the Degree of Bachelor of Arts and shall have obtained Honours in one or more subjects at that Examination, shall be deemed to have taken Honours as required.

**UNIVERSITY OF BOMBAY.**—Any member of the University of Bombay who shall have passed the Examination at that University for the Degree of Master of Arts and shall have been placed in the First or the Second Class in that Examination, shall be deemed to have taken Honours as required.

**UNIVERSITY OF CALCUTTA.**—Any member of the University of Calcutta who shall have passed the Examination at that University for the Degree of Bachelor of Arts, and shall have been placed in the First Division in two or more subjects of that Examination, shall be deemed to have taken Honours as required.

**UNIVERSITY OF MADRAS.**—Any member of the University of Madras who shall have passed the Examination at that University for the Degree of Bachelor of Arts, and shall have been placed in the First Class in two or more divisions of that Examination, shall be deemed to have taken Honours as required.

**UNIVERSITY OF THE PUNJAB.**—Any member of the University of the Punjab who shall have passed the Examination at that University for the Degree of Master of Arts, and shall have been placed in the First or the Second Class in that Examination, shall be deemed to have taken Honours as required.

**UNIVERSITY OF CAMBRIDGE.**

The University of Cambridge confers Degrees on Students in Arts (including Mathematics, Classics, Moral Sciences, Natural Sciences, Theology, History, Oriental Languages, Mediæval and Modern Languages, Mechanical Sciences, and

Economics), also in Divinity, Law, Medicine and Surgery, and Music. It also confers Diplomas in Geography, Mining, Tropical Medicine, Public Health, Education, and Agricultural Science.

Several of the Triposes are divided into two parts, and a Degree can in some cases be obtained by passing the first part only. In Mathematics both parts must be passed for a Degree, or Part I. of Mathematics and Part II. of Natural Science may be taken. Similarly a degree may be obtained by taking two parts of two different Triposes; *e.g.*, Part I. of History, and Part II. of Law.

The following are the main conditions for obtaining the Degree of Bachelor of Arts, under the three heads of A, Residence; B, Examination; C, Regulations for Affiliated Institutions; D, Expenses.

#### A.—RESIDENCE.

In order to obtain the B.A., or speaking generally, any other Degree, it is necessary to have resided in Cambridge as a member of the University for the prescribed period. The period of residence is measured by Terms—*i.e.*, divisions of the year during which University business is carried on. There are three Terms in each year, called respectively the Michaelmas, the Lent, and the Easter Terms, which must include collectively at least 227 days, and the Student in Arts must in general “keep” by residence at least nine of these Terms; but it is sufficient for this purpose to have resided during three fourths of the Term, and the public lectures are generally arranged to cover about that period or rather more, averaging therefore from eight to nine weeks per Term, or about half the year. Residence at the University out of Term time not only does not count for the Degree, but is actually forbidden to Students, unless it be by special permission, or in the house of a parent or guardian. Permission is freely given, for certain parts of the Vacation, to Students of good character who *bona-fide* desire it for purposes of study. In the case of Students coming from “affiliated” Colleges elsewhere, residence for two years or more in such College is accepted as an equivalent for the first three terms of University residence. During the Long Vacation (in the months of July and August), it is usual to allow a certain number of Students reading for Honours to reside within the precincts of the College for a period of from six to seven weeks.

In order that the residence of a Student may be recognised it is necessary for him to be “matriculated”—*i.e.*,

formally enrolled as a member of the University; and it is usual, but not indispensable, to be admitted also as a member of one of the seventeen Colleges which are represented as such in the Government of the University. Such membership does not necessarily imply actual residence within the walls of the College; but those Collegiate Students who by choice or necessity reside outside can only do so in lodgings licensed by the University, and are required to be present at dinner in the College Hall, at such College Lectures as the tutor may prescribe, and also, unless specially exempted as not being members of the Church of England, at some of the services at the College Chapel. The restraints on remaining out late at night are the same in lodgings as in College, the lodging-house keeper being required to report the hour at which the Student comes in.

Those Students who do not belong to a regular College are classed as Non-Collegiate, and are subject to the control of a University officer, called the Censor. They must reside either (1) with parents or guardians, or (2) in lodgings licensed by the University, or (3) in a private hostel, recognised as such by the University, and managed by a member of the Senate.

Applications for admission in October should be sent to the Tutor of a College in the preceding month of May.

## B.—EXAMINATIONS.

### I. PASS.

The series of examinations which must be undergone by a Student who simply desires to qualify for a B.A. Degree, without aspiring to any honorary distinction, are as follows:—

I. The Previous Examination, or Little-go, is divided into three Parts, and is held four times a year. A student may take all three Parts together or separately. Failure in any one does not affect the other two parts. The Examination should, if possible, be passed in the first term of residence. At many Colleges, if it is not passed within a year after matriculation, the Student is not allowed to remain at the University. The subjects of the Previous Examination are:—

PART I.—(1) One Gospel in the original Greek or a Greek classic. (2) One Latin classic. (3) One Greek classic. (4) Unseen passages from some Latin author, the use of a dictionary being allowed. (5) Latin and Greek accidence and syntax.

But Indian Students may be examined in certain English books instead of papers (1) and (3), and may write an English

essay instead of answering the questions on Greek Grammar in paper (5).

PART II.—(1) Paley's "Evidences of Christianity"; or as an alternative, a paper on Elementary Logic or on Elementary Heat and Chemistry. (2) Geometry. (3) Arithmetic. (4) Elementary Algebra. (5) An English Essay on a subject from a Standard English work.

PART III.—A Student who desires to study for a Tripos (Honours) is further required to pass the "Additional Subjects"—viz., (1) Mechanics with Elementary Trigonometry, or (2) French, or (3) German.

II. The General Examination is held in June and December, and consists of two parts, either of which is open to all Students who are in their third Term of residence, having previously kept two Terms and passed the previous Examination. The subjects are at present :—

PART I.—One Latin and one Greek classic. Algebra, Elementary Statics with Elementary Trigonometry, and a (voluntary) Latin paper.

PART II.—The Acts of the Apostles in the original Greek, a portion of English History, an Historical Essay; Elementary Hydrostatics and Heat, and a (voluntary) paper on a play of Shakespeare, or a work of Milton.

III. A "Special Examination," open to all Students who have entered on their ninth\* Term at least, having previously kept eight Terms, and have passed their Previous and General Examinations. When the Special Examination is divided into two Parts (as is the case with most subjects), Part I. is open to all Students who have entered on their Sixth Term at least, having previously kept five Terms. The subject of the Examination (under the existing regulations) may be any of the following at the option of the student: Chemistry, Classics, History, Law, Mathematics, Mechanism, and Applied Science, Modern Languages, Physics, Political Economy, Theology, Botany, Geology, Logic, Physiology, and Zoology. There are also Special Examinations in Agricultural Science. A Diploma in that science is open to persons who are NOT members of the University

IV. Or, in place of the General Examination followed by a Special Examination, the candidate may qualify for the Ordinary Degree by passing in two Special Examinations.

## 2. HONOURS.

Indian Students usually try to graduate in Honours. The examinations for Honours are called Triposes, and the branches of study for which there are separate Triposes are the following : Mathematics ; Classics—*i.e.*, the Languages, Literature, and History of Greece and Rome ; Moral Sciences ; Natural Sciences ; Theology ; Law ; History ; Oriental Languages, of which the subjects are Hebrew, Aramaic (Eastern and Western), Arabic, Sanskrit and Persian ; Grammars of the Semitic and Indo-European Languages ; and the Comparative Mediæval and Modern Languages, Mechanical Sciences, and Economics. Some of these Triposes consist of a single Examination ; others are divided into Parts.

In each Tripos, or in the separate parts of each Tripos, the candidates who are considered to deserve Honours are arranged in classes according to merit, and in some cases the members of each class are arranged in the like order. A place in any class in the last or only part of any Tripos entitles to a B.A. Degree, and a place in any class in both parts of the Law Tripos, or in one part after taking honours in any other Tripos, entitles the candidate also to the degree of Bachelor of Laws (LL.B.) instead of or in addition to the B.A.

But even if a Tripos candidate fails to obtain a place in the Class List, he may still be admitted to the B.A. degree without further Examination, if the Examiners consider that he has acquitted himself sufficiently well to deserve a degree without Honours ; or for a lower standard of proficiency he may be excused the General Examination, but required to pass one of the Special Examinations for the ordinary degree. In addition to these University Examinations, a Candidate for Honours, who belongs to any College, is almost always required by the College authorities to have his knowledge tested at intervals by Examinations conducted under their supervision, or sometimes by joint arrangement among several Colleges.

The Examination for the Law Tripos consists of two Parts—

Part I. includes (1) General Jurisprudence ; (2) History and General Principles of Roman Law ; (3) and (4) Institutes of Gaius and Justinian ; and a portion of the Digest ; (5) English Constitutional Law and History ; (6) Public International Law ; (7) Essays.

Part II. includes (1) and (2) The English Law of Real and Personal Property ; (3) and (4) The English Law of Contract

and Torts ; (5) English Criminal Law and Procedure and Evidence ; (6) Essays.

Candidates who pass in Part I. are excused from the Bar Examination in Roman Law.

Students may keep their Terms at an Inn of Court whilst they are at College, so that they can be called to the Bar at the same time that they take their Degree, if they can afford time for passing the Law Examination during their University course.

A Student who obtains Honours in both parts of the Law Tripos is entitled to the LL.B. (Bachelor of Laws) Degree.

#### C.—GENERAL REGULATIONS FOR AFFILIATED INSTITUTIONS.

Any Student of an Affiliated Institution, who shall have continued a member of it for such length of time, not less than two years, and shall have attended such lectures, and passed such Examinations, as may be required from time to time by grace of the Senate, shall, if admitted as a member of the University otherwise than as an Advanced Student, be entitled to either or both of the following privileges, namely :

(1) To be exempted from all parts of the previous Examination ; (2) to reckon the first Term kept by residence as the fourth Term of his residence, for the purposes of all provisions respecting the standing of Candidates for Tripos Examinations or for Degree Examinations in Medicine, Surgery, or Music, and respecting the standing of candidates for Degrees.

UNIVERSITY OF CALCUTTA.—Any Matriculated Student of the University of Calcutta is entitled to be admitted to the privileges of affiliation who has (1) in accordance with the regulations of that University studied for not less than two years at one or more Institutions for the education of adult students affiliated up to the B.A. standard ; (2) passed the Entrance Examination, and also passed in the first division in the First Examination in Arts or passed in Honours in the Examination for Bachelor of Arts of that University ; provided that in one of these Examinations or in some other Examination held by that University he has satisfied the Examiners in Greek, Latin, Sanskrit, Arabic, or Persian.

UNIVERSITY OF ALLAHABAD.—Any Matriculated Student of the University of Allahabad is entitled to be admitted to the privileges of Affiliation who has (1) in accordance with the regulations of that University studied for not less than two years at one or more Institutions for the education of adult Students affiliated in Arts up to the B.A. standard ; (2)



passed the Entrance Examination, and also passed in the first division in the Intermediate Examination in Arts or in the first or second division in the Examination for the Degree of Bachelor of Arts of that University; provided that in one of these Examinations or in some other Examination held by that University he has satisfied the Examiners in Greek, Latin, Sanskrit, Arabic, or Persian.

**UNIVERSITY OF BOMBAY.**—Any Matriculated Student of the University of Bombay is entitled to be admitted to the privileges of Affiliation who has (1) in accordance with the regulations of that University studied for not less than two years at one or more colleges or Institutions for the education of adult Students recognised in Arts; (2) passed the Matriculation and Previous Examinations, and also passed in the first class in the Intermediate Examination for the Degree of Bachelor of Arts of that University; provided that in one of these Examinations or in some other Examination held by that University he has satisfied the Examiners in Greek, Latin, Sanskrit, Arabic, or Persian.

**PUNJAB UNIVERSITY.**—Any graduate in Arts of the Punjab University who has, in accordance with the regulations of that University, passed the Entrance Examination, the Intermediate Examination in Arts, and the Bachelor of Arts Examination, and has in one of these Examinations or in some other Examination held by that University satisfied the Examiners in Greek, Latin, Sanskrit, Arabic, or Persian, is entitled to be admitted to the privileges of Affiliation.

**UNIVERSITY OF MADRAS.**—Any Student of the University of Madras is entitled to be admitted to the privileges of Affiliation who has (1) in accordance with the regulations of that University studied for not less than two years at one or more institutions affiliated as first-grade Colleges for the education of adult Students; (2) passed the Matriculation Examination of that University, and also passed in the first class in the First Examination in Arts, or passed the Examination for the Degree of Bachelor of Arts, obtaining a first or second class in the English Language Division of that Examination; provided that in one of these Examinations or in some other Examination held by that University he has satisfied the Examiners in Greek, Latin, Sanskrit, Arabic, or Persian.

#### D.—EXPENSES.

The necessary or usual Expenses of University residence may be considered under the following heads:—

## I.—FIXED PAYMENTS.

(Caution Money* .. .. .)	£15	0	0)
An Entrance Fee (which varies at different Colleges), say .. .. .	£5	0	0
Fee for Previous Examination (2 parts)	2	10	0
„ Examinations for Ordinary Degree†—			
General .. .. .	2	0	0
Special .. .. .	3	0	0
„ B.A. or LL.B. Degree .. .. .	7	0	0
	<hr/>		
Total cost of Ordinary Degree	£19	10	0

\* Trinity College requires also an additional deposit of £50.

† The fee on admission to the Examination in the Additional Subjects of the Previous Examination is £1 5s., and to one or any number of Tripos Examination is £3, making the total cost of an Honour Degree £18 15s.

## II.—COST OF INSTRUCTION.

Of the public lectures provided by the University, some may be attended without any fee; if any fee is charged, it is either £1 1s. or £2 2s. per Term. Students of Natural Sciences have, in addition, Laboratory fees to pay; these vary from £2 2s. to £6 6s. a term, according to the number of subjects studied. Further instruction is provided by each College for its own Students out of a fund provided by a payment from each student to the College Tutor, which varies at the different Colleges from £6 to £8 per Term. This sum also covers the remuneration of the Tutor for the general supervision which he exercises over the Students.

If private tuition is required over and above the University and College Lectures, the scale of payment is £9 per Term (3 hours a week); £10 10s. for the working part of the Long Vacation—*i.e.*, about seven weeks during the months of July and August.

## III.—RESIDENTIAL EXPENSES.

There are certain strictly necessary expenses for Under-Graduates at Cambridge, as study, rent and College payments, which amount to from £25 to £40 per Term, for those who live in College. In addition to the above, allowance must be made for books, groceries, and other goods supplied by tradesmen, as well as for pocket and travelling money and other personal expenses. The expenses of Non-Collegiate Students are rather less.

The expenses of a Student at Cambridge may be estimated at from £130 to £180 a year; but it is advisable that he should have as much as £180 in order to gain the full benefit

of College life. As the vacations cover nearly half the year, it is desirable that an Indian Student studying at Cambridge should have an allowance of from £270 to £300.

Students are recommended to become members of the Boat and Cricket and other College Clubs, the Union Society, etc. The subscriptions (exclusive of entrance fees), all taken together, amount to £5 or £6 per annum.

**INDIAN CIVIL SERVICE CANDIDATES.**—The subjects prescribed for the Open Competitive Examination are all included in one or other of the Cambridge Triposes. A Candidate for the former may conveniently be preparing at the same time for a Tripos, in the one, or two, subjects on which he intends to rely PRINCIPALLY for the I.C.S., and for these principal subjects the regular University lectures will be suitable. As regards the SUBSIDIARY subjects, which he intends to take up for the I.C.S., but not for a Tripos, special instruction in some subjects is provided by the Board of I.C.S. Studies. Instruction in other subjects is provided by the Colleges for the same purpose. The University provides instruction for Probationers in all the subjects prescribed for the further Examination. At all the Colleges a portion of the College Tuition Fee is remitted to selected Candidates, or applied towards the expenses of their special Lectures, either unconditionally, or at the discretion of the authorities in each particular case. At several of the Colleges, Scholarships and Exhibitions are awarded on the ground of distinction in the Open Competitive Examination. Statements as to the Cambridge arrangements for both Examinations are printed every year by the Board of I.C.S. Studies, and can be obtained from the Secretary, Mr. H. A. Roberts, M.A., University Offices, Cambridge.

(See the "Cambridge University Calendar" or "The Students' Handbook to the University and Colleges of Cambridge." University Press. Price 3s. 4d., post free).

### THE UNIVERSITY OF LONDON.

The University grants Degrees in the Faculties of Theology, Arts, Laws, Music, Medicine, Science, Engineering, and Economics. It also holds an Examination and grants a "Teacher's Diploma" in Pedagogy.

All the Examinations of the University, together with Prizes, Scholarships, Medals, etc., are open to Women upon exactly the same conditions as Men.

Candidates for Degrees must have passed the MATRICULATION EXAMINATION or been exempted therefrom.

Every candidate for the Matriculation Examination must present a Certificate of his having completed his sixteenth year. He must show a competent knowledge of each of the following five subjects:—(1) English—One Paper. (2) Elementary Mathematics—Two Papers. (3) Latin, or Elementary Mechanics, or Elementary Physics—Heat, Light, and Sound, or Elementary Chemistry, or Elementary Botany—One Paper. (4) and (5) Two of the following subjects, neither of which has already been taken under Section (3).—One Paper in each subject. If Latin be not taken, one of the other subjects selected must be another Language from the List, either Ancient or Modern—Latin, Greek, French, German, Arabic, Sanskrit, Spanish, Portuguese, Italian, Modern Dutch, Hebrew, Chinese, Ancient History, Modern History, Logic, Physical and General Geography, Geometrical and Mechanical Drawing, Mathematics (more advanced), Elementary Mechanics, Elementary Chemistry, Elementary Physics—Heat, Light and Sound, Elementary Physics—Electricity and Magnetism, Elementary Biology—Botany, Elementary Biology—Zoology. Fee, £2.

Courses of study for the Matriculation Examination can be taken at some of the London Colleges, *e.g.*, King's College, University Tutorial College, and Birkbeck College. The fees range from £7 7s. to £18 18s.

The Examination is held each year in January, June, and September.

Diplomas of Degrees granted by recognised Indian Universities entitle the holder thereof to registration as Matriculated Students without further Examination.

Persons of nineteen years of age and upwards who present foreign Certificates, or Indian Certificates other than Diplomas of Degrees granted by recognised Indian Universities, from an Academical or other educational authority, which indicate that they have attained a standard, *primâ facie*, equal to that of the Matriculation Examination, may apply for Examination before the Board of Moderators instead of at the Matriculation Examination. This Examination can only be held at the University in London. The Board will take into account the Certification that the Candidate has presented, or any Examination that he has passed; but no Candidate will be accepted without *viva-voce* Examination. There will be no Syllabus, and the Board will apply any test they may consider necessary in the case of any

Candidate ; it will not, however, be considered necessary to adhere strictly to the list of subjects included in the Matriculation Examination. Special importance will be attached to the degree of proficiency displayed by the Candidate in the English Language. The Certificate for passing this Examination will be accepted by the University in lieu of the Matriculation Examination Certificate. There are no *partial* exemptions from the Matriculation Examination.

Candidates for the Degree of Bachelor of Arts, or of Science, or of Medicine, or of Laws, are required to have passed the Matriculation Examination, and to pass Two (in the case of Medicine, Three) subsequent Examinations.

The Intermediate Examinations in Arts and in Science take place in July in each year, and that for Bachelor of Laws in September. Fee, £5.

The Bachelor of Arts (B.A.) and the Bachelor of Science (B.Sc.) Examinations take place in October, and the Bachelor of Laws Examination takes place in September. Fee, £5. The subjects of the Honours Examinations are more advanced than in the Pass Examinations.

The Regulations respecting these Degrees and those of M.A., D.Sc., LL.D., and D.Lit., are to be found in the Calendar of the University, or separate Regulations for each Faculty may be obtained gratis on application to the Registrar.

For Degrees in Medicine of the University, see pp. 63-69.

All information respecting the conditions of Examinations for External Students can be had on application to the External Registrar, University of London, South Kensington, S.W.

### UNIVERSITY COLLEGE, LONDON.

By the University College Transfer Act (1905), University College was on January 1st, 1907, incorporated in the University of London.

This College is situated in Gower Street, W.C., near the Gower Street Metropolitan Station. It is non-resident.

The Session is divided into Three Terms, beginning early in October.

The purpose of the College is to afford at a moderate expense the means of education in Literature, Science, and the Fine Arts, and in the knowledge required for admission to the medical and legal professions, and in particular for affording the means of obtaining the education required for taking the Degrees now or hereafter granted by the University of London.

The curriculum of each Student must be settled after

consultation with the respective Professors, and must be approved by the respective Faculties.

The College arranges for Undergraduates courses and for Intermediate, Pass and Honour Courses in the Faculties of Arts, Science, Medicine, Economics, Laws, and Engineering, also for Post-graduate courses for M.A., D.Sc., etc., and for Research work.

Both Men and Women Students are admitted as Students, without previous Examination; to any class or classes they may select.

The Secretary of State for India has acceded to a request that Selected candidates for the Civil Service of India may pass their probationary period at University College, residing with their parents, or with some suitable person sanctioned by the Council, on the understanding that such person will undertake responsibility for the conduct of the Candidates who may study at University College, and enforce rules of discipline upon them.

There are Junior as well as Senior Classes of many subjects; and for all the scientific subjects there are museums and laboratories where students work under the direction of the Professors.

**FEES.**—Preliminary Scientific Course, Part I., London University, 26 guineas.

Preliminary Scientific Part II. and Intermediate Medicine, 58 guineas if paid in one sum, 63 guineas if paid in two instalments.

For the Medical Examination required by the Examining Board in England, and by the Society of Apothecaries' First Examination. Parts I., II., III., 21 guineas. First Examination, Part IV., and Second Examination, 58 guineas if paid in one sum, 63 guineas if paid in two instalments.

The fees range from Two to Twelve Guineas the Session for each Class.

The Faculty of Engineering, including the departments of Mechanical, Electrical, Civil, and Municipal Engineering, is intended to provide a systematic training in the application of scientific principles to industrial purposes. The education given in the Departments in this Faculty is not intended to supersede such necessary practical training as can only properly be acquired in the office, workshop, or factory.

Students are, however, advised to pass the Matriculation Examination of the University of London before entering the College, in order that they may take the course for the B.Sc.

Engineering Degree or the B.A. Honours Architecture Degree. Each of these Courses extends normally over three years from Matriculation.

Curricula have been arranged for the different branches of ENGINEERING; unless there are strong reasons to the contrary, it is advisable that one or other of these curricula should be attended. But in all cases it is especially advisable that the Student should consult one of the professors before deciding what Classes to attend.

The curricula mentioned above include not only instruction in Applied Science, but also such preliminary instruction in Pure Science (especially in Mathematics, Physics, and Chemistry) as a Student ought to have before proceeding to study its applications. The study of Modern languages is not specially included in any of them, but the importance of these subjects to the Student in this Department is exceedingly great, and it may therefore be often advisable that some time should be given to them.

**LAW CLASSES.**—The Course of Instruction in these Classes is specially adapted for Students preparing for the LL.B. Degree in the University of London, for certain of the Bar and Inns of Court (Honours) Examinations, and for the Indian Civil Service Examinations.

The subjects include Roman Law, Jurisprudence, Constitutional Law and History, and Comparative Law.

**THE INDIAN SCHOOL CLASSES** are chiefly in aid of preparation for the Periodical Examinations of selected Candidates for the Indian Civil Service. They include Indian Law, Sanskrit, Arabic, Persian, and the chief Indian Vernaculars; also History of India.

## KING'S COLLEGE, LONDON.

### GENERAL INFORMATION.

King's College is (by the University of London Act, 1898) a School of the University of London in all its Faculties.

The Hospital is in Portugal Street, Lincolns Inn, within three minutes' walk of the College.

The General Education at King's College, London, is conducted in several distinct but connected Faculties and Departments, viz. :—

- I. THE FACULTY OF THEOLOGY.
- II. THE FACULTY OF ARTS, including (1) General Literature, Secondary Teachers' Training Course, Day

- Training College, and Oriental Studies ; (2) the Department of Architecture.
- III. THE FACULTY OF SCIENCE : (A) Natural Science Division ; (B) Medical Division (Preliminary and Intermediate Studies) ; (C) Department of Bacteriology ; (D) Department of Public Health.
- IV. THE FACULTY OF ENGINEERING, including Mechanical, Electrical, and Civil Engineering.
- V. THE FACULTY OF MEDICINE (Advanced Medical Studies at King's College Hospital).  
[For Medical Studies see also Faculty III.]
- VI. KING'S COLLEGE FOR WOMEN (Kensington Square).
- VII. KING'S COLLEGE SCHOOL (established at Wimbledon Common).
- VIII. THE CIVIL SERVICE DEPARTMENT.
- IX. STRAND SCHOOL, suitable for Commerce and the Civil Service.

A separate Prospectus is prepared for each of these Faculties and Departments, and will be forwarded on application to The Secretary, King's College, Strand, W.C.

The Students of the College are either **MATRICULATED** or **NON-MATRICULATED**.

**MATRICULATED** Students are those admitted to the regular and full course of study prescribed in their respective Faculties and Departments.

**NON-MATRICULATED** Students are those who, being unable to attend the whole course, are desirous of studying any particular subject or subjects. They are at liberty to enter for any of the College Classes.

The Faculty of **ENGINEERING** provides a systematic course of study for those intending to devote themselves to Engineering, Chemical Manufacture, or Metallurgy. It is so arranged as to give preparation for those wishing to take the B.Sc. in Engineering at the University of London.

All Students who intend working for the B.Sc. Degree are strongly advised to sit for the Matriculation of the University before entering the College in October.

The Course of Engineering study can extend over three or four years. The three years one is a continuous College Course, and can be taken in either Mechanical and Electrical Engineering, Civil Engineering or Mining, Engineering and Metallurgy. The four years' Course for Mechanical and Electrical Engineering is arranged so that Students who show sufficient progress may, after one complete year at the College, undergo a course of practical training in some engineering



works during six months of each of the following years. The four years' Course of Civil Engineering also allows of a certain time being spent in works.

Candidates for admission to the College who have not passed the Matriculation Examination of the University of London, including as subjects Mathematics (more advanced) and a Science subject, will be required to pass the College Entrance, which is held at the beginning of the academic year. At the end of the Course the College Certificate or Associateship can be obtained. This Course is recognised by the Council of the Institution of Civil Engineers as rendering the Student eligible for admission as a Student of that Institution.

All the Engineering Classes are open to External Students desirous of studying a special subject on payment of the specified fees. Evening Classes are also held.

#### FEES.

##### MATRICULATED STUDENTS.

ENTRANCE FEE.—Matriculated Students in the Faculties of Theology, Arts, Science, and Engineering, pay an Entrance Fee of £5 5s.

In the Medical Faculty the Composition Fee covers the Entrance Fee.

TERMINAL AND COMPOSITION FEES.—The Fees for the ordinary College courses are given below, but further details will be found under the various Faculties.

Faculty of Theology—£10 10s. per term (day classes).

Faculty of Arts—£8 8s. per term, or £22 1s. per annum, and £9 9s. or £24 3s. with Science subjects.

Division of Architecture—£15 15s. per Term, or £42 per annum.

London Matriculation Class—£12 12s. per Term.

Faculty of Science—

1. London University Course for B.Sc. (Pass or Honours),  
£31 10s. per annum or £11 11s. per Term.
2. Course for the Institute of Chemistry Examinations—  
First Year, £18 18s. per Term or £45 per year.  
Second Year, £15 15s. per Term or £35 per year.  
Third Year, £13 13s. per Term or £34 per year.  
(The Subsidiary Subject taken in the Third Year is an extra charge.)
3. Preliminary Scientific Course. Part I. £26 5s.  
Intermediate M.B. Course and Preliminary Scientific Course. Part II. £57 15s. if paid in one sum, or £63 if paid in two instalments.

Faculty of Engineering and Applied Sciences :—

Electrical, Mechanical, or Civil Engineering : £52 10s. per annum if paid in one sum at the commencement of each year, or £54 12s. if paid in two instalments.

Faculty of Medicine—

Conjoint Examining Board Course, including the Courses for the 1st, 2nd, and 3rd Examinations : 135 guineas.

University of London Course, including Pre. Sci. Course, Intermediate and Final Course : 140 guineas.

Advanced Studies at King's College Hospital : 70 guineas paid in one sum, 72 guineas if paid in two instalments.

#### NON-MATRICULATED STUDENTS.

Non-Matriculated Students pay registration fees on entrance varying from 2s. 6d. to 10s. 6d., according to the number of Classes taken.

The Fees payable in the several College Classes are given in the syllabuses of the Classes.

NOTE.—All Fees are payable in advance, *i.e.*, at the beginning of the Term or Session.

### THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE.

This is one of the Recognised Schools of the University of London, and Courses of Lectures (open to all Students without previous Examination) are given in Economics, including Statistics, Politics, and Public Administration; History. Economic and Political; Law; Sociology; Commerce and Industry; Accounting and Business Methods; Banking; Insurance, &c. A special course of lectures has been arranged for Indian students on Parliamentary and Social Institutions, Indian Sociology, &c.

Intending Students can take up any one or more of these Courses of Lectures, on payment of a small fee. It is thought that some of these courses may attract Indian Students whose professional studies do not absorb the whole of their time.

The College provides for all classes without any distinction, opportunities and encouragement for pursuing a regular and liberal course of education of the highest grade and quality in the various branches of knowledge dealt with by the Institution, and especially those prescribed or required by the University of London from time to time.

It supplies liberal courses of education specially adapted to the needs of persons who are, or who intend to be, engaged in any kind of administration, banking, or international trade.

The Lectures are so arranged that Students can pursue a full University Course, extending over not less than three years, and including all the subjects required for the B.Sc. and D.Sc. Degrees in the Faculty of Economics and Political Science.

Further information may be obtained from the Secretary, (Clare Market, Kingsway, W.C.).

## THE SCOTCH UNIVERSITIES.

(EDINBURGH, GLASGOW, ST. ANDREW'S, AND ABERDEEN.)

The Curriculum for the Degree of Master of Arts (M.A.) is the same at all these Universities, with a few variations, and extends over 3 academic years.

Before entering on the Curriculum, the Student has to pass a preliminary examination in—(1) English ; (2) Latin or Greek ; (3) Mathematics ; (4) One of the following : Latin or Greek (if not already taken) ; French, German, Italian (or such other language as the Senatus Academicus may approve), Dynamics. There is a Higher and Lower Standard in Latin, Greek and Mathematics, and candidates must pass on the Higher Standard in at least one of these three subjects. The preliminary examination is held twice every year, beginning in March and September. Fee, 10s. 6d. In the case of a Student whose native language is other than European, such language may be accepted as a substitute for a modern European language ; and Sanskrit or Arabic may be accepted as an alternative for Latin or Greek. A Joint Board of Examiners, which controls and supervises the preliminary examinations, is appointed annually by the University Courts of the four Scottish Universities, and the Board sits for a year at each University in rotation. The Board deals with applications for exemption from the whole or part of the preliminary examinations on the ground of passes in equivalent Examinations. Exemptions : Indian Students who present evidence that they have passed examinations which would admit them to Universities in India are exempted, provided (1) that the evidence shows that they possess a knowledge of English sufficient to follow the lectures with profit ; (2) that before attending any Class in English, any other Language, Mathematics or Natural Philosophy they shall produce evidence of having passed the examination in this subject on a certain standard (generally, the higher standard) ; and (3) that candidates for degrees in Engineering shall produce evidence of a knowledge of Mathematics equivalent to the standard of Higher Mathematics in the Preliminary

Examination. The Academic year commences on October 1st.

Candidates for the ordinary Degree of Master of Arts must attend full courses on, and be examined in, at least five subjects, selected from the following Departments of Study : 1. Language and Literature ; 2, Mental Philosophy ; 3, Science ; 4, History and Law. The Degree of Master of Arts with Honours may be taken in any group in which Honours Classes have been established in at least two subjects. The candidate must take up at least five subjects, and must attend seven classes. For the combinations of subjects allowed by the University, see the Regulations of the Faculty of Arts.

The Degree of Bachelor of Science (B.Sc.) is conferred by all the four Scottish Universities. There are two Examinations for this Degree. The first is in Mathematics or Biology (Botany and Zoology), Natural Philosophy and Chemistry. The second is on a higher standard, in at least four of the following subjects : (i.) Mathematics ; (ii.) Natural Philosophy ; (iii.) Astronomy ; (iv.) Chemistry ; (v.) Human Anatomy, including Anthropology ; (vi.) Animal Physiology ; (vii.) Geology, including Mineralogy ; (viii.) Zoology, including Comparative Anatomy ; and (ix.) Botany, including Vegetable Physiology.

Among the Universities and Institutions at present recognised in regard to certain of the courses required for the B.Sc. Degree are the Colleges affiliated to the Universities of India.

Candidates for the Degree of B.Sc. must in the course of not less than three academical years (*i.e.*, three winter Sessions, or two winter Sessions and three summer Sessions) attend at least seven courses of instruction in the subjects included in the Science Examination which they purpose to undergo.

Two Degrees in Science (Engineering) are conferred by the Universities of Edinburgh, Glasgow, and St. Andrew's.

Two Degrees in Science (Public Health) are conferred by the Universities of Edinburgh and Glasgow.

The Degree of Bachelor of Science (B.Sc.) in Agriculture is conferred by the Universities of Aberdeen, Edinburgh, and Glasgow.

The Degree of Doctor of Science (D.Sc.) is open to the B.Sc. of five years' standing, or to the Master of Arts (M.A.) with First or Second-Class Honours in Mathematics and Natural Philosophy of five years' standing ; and, on certain conditions (chief among which is that they must have spent at least two winter Sessions as research Students in the University granting the Degree), graduates of other Univer-

sities who hold degrees accepted as equivalent to the B.Sc. and Honours M.A. A Candidate is expected to show a thorough knowledge of one branch of Science, and to submit a thesis recording original research for the approval of the Senatus.

The Degree of Doctor of Philosophy (D.Phil.) and Doctor of Literature (D.Litt.) are open to Masters of Arts with honours of five years' standing, or to Graduates of other Universities on similar conditions to those laid down for the D.Sc.

The Fees for the above Degrees are as follows :—B.Sc., £6 6s. ; D.Sc., D.Phil., and D.Litt., £10 10s.

Candidates for the Schoolmasters' Diploma (Edinburgh only) must be Graduates in Arts of a Scottish, English or Irish University, or some other University approved of by the Senatus and the University Court. They must pass an Examination in the Theory, Art, and History of Education, and must satisfy the University of their practical aptitude as Teachers.

The Degrees are open to Women.

The annual amount of Matriculation, Class Fees, &c., of the regular course in Arts may be estimated at about £13 13s.

(For Degrees in Medicine, see p. 73-75 of this Handbook).

## UNIVERSITY OF DUBLIN (TRINITY COLLEGE).

This University confers degrees in Arts, Science, Medicine, &c. Attention has been given to making the professional Schools of Medicine and Engineering as efficient as possible, and laboratories have been built and endowed in various branches of science. The University has a very successful School of Engineering. The School insists on its students having a good general education, and during their course in the Engineering College, they must be members of Trinity College. If they wish to obtain the degree in Engineering, they must also proceed to the B.A. degree of the University. The general course in Civil Engineering extends over three years. The first year's work is mainly preliminary; the second and third year's work cover the whole ground of engineering, and include lectures on Electrical Engineering, but students who wish to obtain a diploma in Electrical Engineering are required to take a special fourth year's course in the subject.

## UNIVERSITY COLLEGE OF WALES, ABERYSTWYTH

This is one of the constituent Colleges of the University of Wales. The Session is divided into three terms beginning early in October. The object of the College is to afford at a moderate expense means of instruction in all branches of learning and science, and for obtaining the Degrees of the University of Wales.

Men and women are admitted to the College without previous examination.

There are special Departments in Law and Agriculture. The course of instruction in law is especially adapted for students preparing for the B.A. and LL.B. Degrees of the University of Wales and for the Bar examinations.

Special Classes are also held for Solicitor's Clerks.

For the Course in Agriculture, see page 18.

There are hostels for men and women students.

Tuition fees, £11 per annum.

Hostel fees, from 10 to 17 guineas per term.

Full particulars with reference to the College can be obtained from the Registrar.

## UNIVERSITY OF MANCHESTER.

This is a non-resident University. It confers Degrees in Arts, Sciences, Technology, Law, Music, Commerce, Theology, and Medicine.

The Session for all Faculties except Medicine and Technology commences in October, and is divided into three terms. For Medicine there are a winter and a summer Session, extending respectively from October to March, and from April to July. The Session for the Faculty of Technology commences in September.

Students cannot enter until they have attained the age of 16 years (in the case of women 17 years). They must produce a testimonial of good character and proficiency from their last instructor, or such other evidence as shall be satisfactory to the Vice-Chancellor.

Candidates for Degrees in all the Faculties of the University are required to have passed the Matriculation Examination. The Matriculation Examination is held twice in each year, in July and in September.

Candidates presenting themselves for the Matriculation Examination are required to satisfy the Examiners in 1, English Language *or* Literature; 2, English History; 3, Mathematics; 4, *three* of the following, *one* of which must

be a Language : Greek, Latin, French, German, some other Language approved by the Board, Elementary Mechanics or Physics, Chemistry, Geography, Natural History.

The Matriculation Examination Fee is £2. Class Fees for the B.A. and B.Sc. Courses range from about £18 to £30 per Session, according to the subjects taken.

In most of the Faculties the fee for the Intermediate and Final Examinations is £1 each, and for conferring the Degree, £5.

There is a Faculty of COMMERCE in connection with which the University confers the Degrees of Bachelor of Commerce and Master of Commerce. The Degree of Bachelor of Commerce is granted to Matriculated Students who have attended the Classes and satisfied the Examiners in the following subjects :—Political Economy, the Organisation of Commerce and Industry, Modern History, Geography, Commercial Law, Accounting, a Modern Language, and one or more Special Subjects. A Student working for a Degree in the Faculty of Commerce will receive therefore a broad training which is calculated to fit him for public and commercial life.

All Candidates for the Degree of B.Com. are required to have passed the Matriculation Examination of this University.

The course of study for the Degree of B.Com. extends over at least three years.

FEES for the degree of B.Com., approximately 12 guineas a year for three years.

The degree of B.Sc., with Honours, may be taken in Mathematics, Engineering, Physics, Chemistry, Zoology, Physiology, Geology &c., and Botany. The degree in Engineering is accepted as exempting from the examination of the Institute of Civil Engineers for Associate Membership. The course extends over a period of three years.

## THE UNIVERSITY OF BIRMINGHAM.

The University Session, or academic year, is divided into three Terms, and commences in October.

The Classes and Laboratories of the University are open to all who are sufficiently prepared to take advantage of the instruction offered. Every person seeking admission as a Student to a recognised course of instruction in preparation for a Diploma, Certificate, or other professional qualification, must produce such testimonial or reference and pass such Examination as shall be deemed necessary by the Vice-Principal ; but no Examination is as a rule deemed necessary in the case of students attending classes for the purposes of

general culture, who are not preparing for University Examination.

Degrees are conferred in Arts, Science (I. Engineering : (A) Mechanical ; (B) Civil ; (c) Electrical. II. Metallurgy ; or III. Mining), and Commerce.

Although the Classes in the University are open to all Students who may wish to join them, students are strongly recommended to pass some qualifying Examination and be Matriculated before entering the University. It is only Matriculated Students who can become undergraduates and enjoy the privileges of Membership of the University and of the Guild of Undergraduates, and are eligible to become Candidates for Degrees in the University.

The following Examinations are accepted in lieu of the Matriculation Examination :

1. The Previous Examination (Cambridge). 2. Respon- sions (Oxford). 3. The Preliminary or Matriculation Examination of any recognised University.

Provided that Candidates who offer No. 3 have passed at one Examination in all the subjects required by the regulations for Matriculation.

Forms of application must be accompanied by a certificate of good character from the last school attended, or from some responsible person, and by the Matriculation Fee of £2.

Candidates must pass in *five* subjects at one Examination, viz. :—(1) English History and Literature ; (2) Mathematics ; (3), (4), and (5), Three Subjects (of which one must be a Language) chosen from the following list :—(A) Latin, (B) Greek, (C) French, (D) German, (E) Italian, (F) Spanish, (G) Higher Mathematics, (H) Experimental Mechanics, (I) Chemistry, (J) Geography, (K) Botany, (L) Animal Biology, (M) Geometrical Drawing.

Candidates for the Bachelor's Degree in Pure Science, and for the Bachelor's Degree in Arts, are required to have spent at least three Sessions in attendance on courses of study in the University after Matriculation, and in the case of Science to pass two University Examinations, or in Art three Examinations. If the Candidates before entrance to the University have passed the Intermediate Examination (or an Examination recognised by the University as equivalent to that Examination), they will be allowed to sit for the Final Examination after two years' study ; but in no case will the degree be conferred on such candidates until they have completed a further year of study, after which they become eligible for the Degree of Master of Science or Master of Arts.



Candidates may obtain the Degree of Bachelor of Science in Mechanical Engineering, Civil Engineering, or Electrical Engineering, after attendance on prescribed courses of study in the University extending over a period of at least four years after Matriculation. But if a Candidate before entrance to the University has passed the Intermediate Science or the First Engineering Examination (or an Examination recognised by the University as equivalent), he will be allowed to enter on the second year courses of study, and will be eligible for the Degree after three years instead of four.

The Degree of B.Sc. (Engineering), provided that the Engineering Matriculation Examination be passed on entering upon the course of study, is recognised as a preliminary qualification for appointment of Assistant Engineers to the permanent establishment of the Public Works Department of India, and as exempting from the examination of the Institution of Civil Engineers for Associate Membership.

In MECHANICAL ENGINEERING the training throughout the course is largely practical and experimental in its character; the University Workshops, consisting of Forge, Foundry, Machine Shop and Pattern-making Shop, are very extensive, and equipped with the most modern tools.

In the latter part of the course attention is directed to experimental work in the Engineering Laboratories, which are fitted with modern appliances for demonstration of the principles underlying engineering practice.

In CIVIL ENGINEERING, the courses of study are carried on by Lectures, Workshop, Drawing, Laboratory, Exercises, and Field Work, the object being to give the Student a thorough training, both theoretical and practical, in those subjects, a knowledge of which is necessary in the practice of the profession of Civil Engineering.

In ELECTRICAL ENGINEERING, the course for Students is the same as that for Mechanical Engineering for the first two years, and only differs in the third and fourth years in the increased time spent in the Electrical Engineering Laboratory, and on the design of examples of Electrical Machinery Apparatus and Installations.

Candidates may obtain the Degree of Bachelor of Science in METALLURGY or MINING after attendance on prescribed courses of study extending over a period of at least three years after Matriculation, and passing examinations at the end of each year. For the Mining Degree candidates are further required to have practical experience in a Mine for at least two months in each year, or to have had at least four months

of such experience before entering on their courses in the University.

The Metallurgical Department provides instruction for those engaged in or connected with Metal Industries, and is intended to meet the requirements of (1) Metallurgists; (2) Metallurgical Chemists; (3) Metallurgical Engineers; (4) Mining and Geological Students; (5) Dental Students; (6) Others interested in Metallurgy.

The courses of study include Lectures, Laboratory teaching, practical work in the Smelting Laboratories, and visits to works.

In Mining, the time of the Students at the University is not entirely devoted to theoretical work; much of it is of a thoroughly practical character. The courses have been so arranged as to meet the requirements of those who intend to become (1) Practical and Consulting Mining Engineers; (2) Colliery Managers; (3) Managers of Metal Mines; (4) Teachers of Mining; (5) Mine Surveyors; (6) Land and Estate Agents; (7) Landowners, Owners of Collieries, and those generally interested in Mines and Quarries.

The Faculty of Commerce furnishes a systematic training, extending over a period of three years (two in the case of approved Graduates of other Universities), for Students who look forward to business careers.

#### FEES.

For the Degree Courses the fees for the various years are:—B.Sc. in Pure Science (according to Science studied) (i.) £16 5s. 6d.—£24 13s. 6d.; (ii.) £12 12s.—£26 15s. 6d.; (iii.) £12 12s.—£27 16s. 6d.

B.Sc. in Engineering (i.) £34; (ii.) £50; (iii.) £50; (iv.) £50 (£55 for Electrical).

B.A. (i.) £19 8s. 6d.; (ii.) £16 5s. 6d.; (iii.) £16 5s. 6d.

B. Com. (i.) £21; (ii.) £24 3s.; (iii.) £24 3s.

Fee for each examination, £2, and Fee on admission to Degrees, £2 each.

#### THE UNIVERSITY OF LEEDS.

The object of this University is, besides promoting education in the usual subjects of University teaching, to provide instruction in such Sciences and Arts as are applicable or ancillary to the Manufacturing, Mining, Engineering, Metallurgical, Fuel, and Agricultural industries, and in other subjects of University teaching.

The University of Leeds grants Degrees in Arts, Commerce, Science, Medicine, Surgery, Dental Surgery, and Law. It provides complete courses for the professions and occupations of Civil, Mechanical, Electrical, Gas and Mining Engineering, Analytical Chemistry, Cloth Manufacture, Dyeing, Leather Manufacture, and Agriculture, and lectures and classes in subjects of general education suitable to those who desire to continue their studies beyond the point reached at school. The classes are, in many cases, suited to students who are preparing for the Examinations of the University of London.

The course of instruction in **COMMERCE** extends over two years and leads up to the Diploma of the University. It includes French or German, Economics, Geography, Accountancy, Mathematics, Commercial Law, etc., and a short technical course.

The **LAW DEPARTMENT** affords systematic instruction for intending Barristers and Solicitors.

The **CHEMISTRY** course includes Inorganic, Organic, Practical, and Applied Chemistry. A practical course in Sanitary Chemistry is arranged on the lines laid down by the General Medical Council and to suit the requirements of Medical Officers of Health.

The course of instruction in **CIVIL AND MECHANICAL ENGINEERING** extends over three sessions, and comprises lectures on Engineering Principles and Works ; Instruction in Machine and Geometrical Drawing ; Experimental work in the Engineering Laboratory. It does not supersede the usual routine of engineering works and offices.

It is very desirable that all students should have some practical experience in engineering works before taking the University course.

The courses of instruction in **ELECTRICAL ENGINEERING** are adapted to those who propose to take the B.Sc. Degree ; for those who are preparing for the University Diploma ; or for those who desire to attend a special part of the courses.

The Department of **TEXTILE INDUSTRIES** comprises the following branches :—(A) Woollen Yarn Manufacture ; (B) Worsted Yarn Manufacture ; (C) Designing, Colouring and Weaving ; (D) Finishing of Textile Fabrics.

Part of the work of the Department is carried out in conjunction with that of the Dyeing Department, so that the whole routine of Textile production—from the raw material to the finished fabric—may be as practically learned at the University as in the mill. The scheme of teaching, as it relates to mechanical operations, is devised to give as varied an experi-

ence in Spinning and Textile Manufacturing as is possible, and also to supplement in an efficient way the Lecture Courses of Study. The Spinning Buildings are equipped with the newest machinery, in the weaving sheds there are 116 looms affording unique facilities for experiments in design, weaving and colouring of all classes of fabrics; the Finishing Shed contains machinery for scouring, milling, cutting and pressing; the Textile Museum has a valuable collection of woven and other specimens, to which Students have access.

There are Special Classes for those who wish to specialise in Design and Ornament for decorated fabrics.

The Department of DYEING includes courses for practical dyers, or masters of dye-works, and instruction relating to the chemistry of colouring matters and their manufacture. The full course is for three years, but shorter courses are open to Students who cannot remain for the full time.

LEATHER INDUSTRIES.—The object of the course of study in this department is, first, to familiarise students with the details of the tanning process; methods of chemical and microscopic analysis are also taught and practised; and in the latter part of the course students are given the opportunity to take part in 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 include :—

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 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 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 diploma course is suitable for those who intend to become technical managers in leather works, and is recommended to those who require a practical knowledge of the science and technology of the industry, but are unable to take a degree course.

There are also advanced courses in Tanning, Leather dyeing and staining, and Practical Microscopy and Bacteriology.

The fees for the B.A. Courses amount to about £16 a year ; for the B.Sc. Courses to about £25 a year ; in the Department of Engineering, Electrical Engineering and Mining, for a full year's course in each, about £30 ; and in the Department of Textile Industries, Dyeing and Tinctorial Chemistry, and Leather Industries about £25.

## COLLEGES FOR WOMEN

### OXFORD AND CAMBRIDGE.

Girton College and Newnham College are both connected with the University of Cambridge. The fees at Girton are £35 a term—£105 a year, that is, for the three Cambridge terms, and at Newnham, £30 or £32 a term. The students at these Colleges have the advantages of University teaching, and many of them pass the Tripos Examinations. At Oxford the Colleges for Women are Somerville College and Lady Margaret Hall.

The Universities of Oxford and Cambridge do not grant Degrees to Women, but the place of the Women Students in Examinations is indicated.

#### CAMBRIDGE TRAINING COLLEGE FOR WOMEN.

**COURSES OF STUDY.**—The object of this college is to give the necessary professional training to women intending to teach in Secondary Schools. In addition to the course of training, it offers the advantages of a College life, and a year's residence in an University town. In September and January Courses begin which include the requirements of the Examinations for Teachers held respectively in June and December by the Teachers' Training Syndicate of the University of Cambridge. In January a Course commences which also includes the requirements of the London University Examination in the Art, Theory, and History of Teaching. Each course consists of three Terms of about ten weeks each, the former ending in June, and the latter in December. In exceptional cases Students may be allowed to reside for a Fourth Term.

The Subjects studied are as follows :—Theory of Education, History of Education, Art of Teaching, School Hygiene, Voice Production and Phonetics, Drawing and Calisthenics.

The Students also practise giving lessons in schools in Cambridge.

**TERMS OF ADMISSION.**—Each applicant is required to give the names of two referees, one at least of whom must have had personal knowledge of the applicant for one year.

A Candidate for admission to the College must be qualified by having passed certain University Examinations.

The Council reserve to themselves the right of admitting in special cases women who are Graduates of other Universities, or who can give other proofs of having received a good education.

**FEES.**—For the year's course of 30 weeks, the Fees amount to £75—including all charges for tuition and residence—and are payable terminally and in advance. In the case of a Student's withdrawal before the completion of the year's course three months' notice is required.

All Students are required to live in College, under the care of the Principal, unless the Council grant special permission for other arrangements.

### BEDFORD COLLEGE, LONDON, FOR WOMEN STUDENTS.

The Session of thirty weeks, which commences in October, is divided into three Terms, with a vacation of four weeks at Christmas and at Easter.

Students joining the College must be not less than seventeen years of age, and will not be required to pass a Preliminary Examination.

Students can enter any separate Class on payment of a small fee, or can take one of the following Courses:—

I. A "University Course" in Arts or Science in preparation for the Examination for Degrees of the University of London.

II. A "College Course," either General or Special.

III. A Professional Training in Teaching.

IV. A Course of Scientific Instruction in Hygiene.

V. The Art School.

There are seven separate Laboratories for Students who join the practical Classes in Botany, Chemistry, Geology, Physiology, Experimental Psychology, Physics, or Zoology.

**UNIVERSITY COURSES.**—Students are prepared for the Examination held by the University of London for the Degrees, Pass and Honours, in the Faculties of Arts and Science; for the Preliminary Scientific Examinations; and for Intermediate M.B. in Chemistry and Physiology. Students are also prepared for the June Matriculation Examination.

**FEES.**—Fees are paid in advance at the beginning of each term on receipt of a memorandum. An entrance fee of 10s. will be charged to all Students on admission to the College. No fees can be returned.

**MATRICULATION.**—A Composition Fee of 27 Guineas a Session, or 10 Guineas a Term, admits a Student to a Matriculation Course (5 subjects).

**INTERMEDIATE IN ARTS.**—A Composition Fee of 30 Guineas a Session, or 11 Guineas a Term, admits a Student to an Intermediate Course in 4 Art Subjects.

**BACHELOR OF ARTS.**—A Composition Fee of 27 Guineas a Session, or 10 Guineas a Term, admits a Student to a B.A. Course (4 subjects).

**INTERMEDIATE IN SCIENCE.**—A Composition Fee of 40 Guineas a Session, or 15 Guineas a Term, admits a Student to an Intermediate Course of Lectures and Practical Work in the Laboratories.

**PRELIMINARY SCIENTIFIC.**—A Composition Fee of 40 Guineas a Session, or 15 Guineas a Term, admits a Student to a Preliminary Scientific Course of Lectures and Practical Work in the Laboratories.

**BACHELOR OF SCIENCE.**—A Composition Fee of 17 Guineas per Term admits to a full B.Sc. Course (3 subjects) of Lectures and Practical Work in the Laboratories.

**COLLEGE COURSES.**—To meet the requirements of Students who are not proceeding to any Degree Examination, a systematic course of study can be arranged to extend over one, two or three years.

**RESIDENCE.**—The College provides accommodation for a Resident Staff and 40 Resident Students.

Students of 18 years of age and over can reside in the College. Each Student has a Study-Bedroom.

Fees vary from 58 Guineas to 68 Guineas a Session, and are payable per term in advance. One term's notice is required before leaving.

#### **BEDFORD COLLEGE—TRAINING DEPARTMENT.**

The course of teaching in this department of the College includes full preparation for the Teachers' Diplomas granted by the Universities of London and of Cambridge. Any Student having satisfactorily passed through a full course of training is entitled to a Certificate granted by the Council of Bedford College.

The Session extends over three Terms of about thirty weeks in all—beginning in October or January.

The practical work is carried on in schools of various types. Each Student gives at least two fully criticised lessons a week.

No Student can be admitted under the age of nineteen. Students are expected to have obtained a Degree or some

other qualification equal to that hitherto required for Registration.

The Fees for the complete Courses are 25 Guineas the Session, or 9 Guineas the Term. An Entrance Fee of 10s. is charged to all Students on admission to the College.

Students can reside in the College. Fees vary from 58 to 68 Guineas per Session.

### THE MARIA GREY TRAINING COLLEGE.

This College is for the training of women who have completed their school education, as Teachers in Middle and Higher Schools and in Kindergarten and Infants Schools.

There are two Divisions in the College. I., the High School Teachers' Training Division; and II., the Kindergarten Teachers' Training Division.

**HIGH SCHOOL TEACHERS' TRAINING DIVISION.**—The Course of Study in this Division is specially arranged to meet the requirements of the Teachers' Examination of the University of Cambridge or of the London Teachers' Diploma Examination, for one of which each Student of the Division is required to prepare. The Course includes the fundamental principles of education, especially in relation to health and to the development of character; the elements of mental and moral science in their application to the education of children; the history of education, the methods of Kindergarten teaching, voice production, and a practical course of drill and black-board drawing.

The Students spend some time weekly in teaching and observing lessons given in the Practising School, under the constant supervision of the Principal or Lecturers.

The ordinary course of study for Students in this Division lasts one year, beginning in September or January. A special course will also be arranged for Students wishing to spend two years on their training, provided they enter in September. The only age limit for Students intending to enter this Division is that they must be 19 on or before July 15th or December 15th, previous to admission.

**KINDERGARTEN TEACHERS' TRAINING DIVISION.**—This Course of Study includes much of the work of the Upper Division, as well as special preparation for Kindergarten work and teaching in the Kindergarten under supervision. It begins in September, and lasts two years and one Term. Students entering this Division should be above the age of 18.

Students in both Divisions are expected to give their



whole time to the work of the College, and each Student is expected to conform to the Time Table of her Division.

Hours of attendance in the College, 9.45 a.m. to 4 p.m., every day, except Saturday.

Students must have passed certain University Examinations, but the Council of the College reserve the right of considering and accepting special cases brought before them by the Principal.

FEES.—£30 yearly for the High School Teachers' Training Division; £24 yearly for the Kindergarten Teachers' Training Division, payable in instalments of £10 and £8 at the beginning of each of the three Terms.

A charge of 5s. a term is made for stationery.

The Cambridge Teachers' Examination Fee is £3 for Students of this College.

The London Teacher's Diploma Examination Fee is £5.

The National Froebel Union's Examination Fee is £2 2s. for each part of the Examination.

HALL OF RESIDENCE.—Students can reside at Winkworth Hall of Residence, 215, Chevening Road, Brondesbury, which accommodates about twenty Students, and is close to the College. Fees, £39 to £50 per College Session of 3 Terms. It is under the wardenship of Miss E. Mabel Case, from whom further particulars can be obtained.

## FROEBEL EDUCATIONAL INSTITUTE

### TRAINING COLLEGE FOR TEACHERS.

This College is situated in West Kensington, London, and provides training for those who wish to become Teachers of children in Schools, Kindergartens, and Private Families. The training is given by means of Lectures and Demonstration Lessons, and also includes a course of Practice under Supervision in different schools and kindergartens.

Students are not admitted to the Junior Division under the age of 17, or the Senior Division under 18. They must hold a qualifying Certificate of good general education.

The Courses of the Junior and Senior Divisions are separate and complete in themselves, but students are advised to pass one year in the Junior Division and then one or two years in the Senior Division. In addition to the training given in the teaching of general school subjects, the Senior courses seek to deepen and extend the knowledge already gained, and to advance considerably the practical skill of the teacher.

The College year for all divisions begins in September. Students can also enter at Christmas and Easter. There are three Terms altogether, about 36 weeks, in the College Session.

Hours of attendance for Students are from 9.30 a.m. to 12.30 p.m., and from 2 to 4.30 p.m. every day, except Saturday, which is a whole holiday.

The College premises are spacious and well equipped, there is a good Library and a room fitted up as a Natural History Museum, to both of which Students have access. Students are expected to take part in the College games and sports, unless they have a Doctor's certificate saying they are physically unfit to do so.

FEES.—(1) Junior Division, preparation for Elementary Certificates, N.F.U., £8 8s. a term.

(2) Senior Division, preparation for Part I. Higher Certificate N.F.U., £8 8s. a term.

(3) Senior Division, extending over four terms, preparation for Part II. Higher Certificate N.F.U., £10 10s. a term.

(4) Senior Division, extending over three terms, preparation for the Cambridge Teaching Diploma, £10 10s. a term.

The expenditure on Kindergarten Materials, Stationery and Gymnastic outfits amounts on an average to about £1 per term.

Many of the Students live during term time in a Hall of Residence in the immediate neighbourhood. The Principal can also recommend other suitable Houses or Boarding houses.

## **MEDICAL STUDY AND DIPLOMAS.**

### **THE GENERAL MEDICAL COUNCIL.**

#### **REGISTRATION OF MEDICAL STUDENTS.**

1. In addition to showing that he has passed a recognised Preliminary Examination in the subjects of general education as hereinafter provided, any person applying for registration as a Medical Student must (1) produce satisfactory evidence that he has attained the age of 16 years; (2) show that he has commenced medical study at a University or School of Medicine or at a Scientific Institution recognised by one of the licensing bodies approved by the Council. The commencement of a course of professional study will not be reckoned as dating earlier than fifteen days before the date of registration.

2. Application for registration should be addressed to the Registrar for the division of the United Kingdom in which the applicant is residing—England and Wales, or Scotland, or Ireland. It must be made on a special form, which can be obtained on application at the offices either of the Medical Council itself, or of one of the various licensing bodies and medical schools, and when forwarded it should be accompanied by the certificates as to age and general education. In the event of any person desiring to be exempted from the regulations in respect of registration he should address himself to the Registrar of the Council, 299, Oxford Street, London, W.

The regulations with regard to registration apply equally to Medical and Dental Students, with the exception that in the case of the latter pupilage with a registered dental practitioner may be regarded as a commencement of professional study, in which case the student is not required to produce evidence of having passed a preliminary examination.

3. Candidates for a Diploma in Dental Surgery shall produce Certificates of having been engaged during four years in Professional Studies, and of having received two years' instruction in Mechanical Dentistry from a Registered Practitioner.

The two years of instruction in Mechanical Dentistry, or any part of them, may be taken by the Dental Student either before or after his registration as a student; but no year of such Mechanical instruction shall be counted as one of the four years of Professional Study unless taken after registration.

4. Testimonials of Proficiency granted by Educational Bodies, according to the subjoined List, in Clause 5, shall be accepted; the Council reserving the right to add to or take from the list.

5. A Degree in Arts of any University of the United Kingdom, or of the Colonies, or of such other Universities as may be specially recognised from time to time by the Medical Council, shall be considered a sufficient Testimonial of Proficiency.

6. The list of Examining Bodies whose Examinations in General Education are recognised by the Medical Council as qualifying for Registration as Medical or Dental Students includes the following:—

University of Calcutta—First Examination in Arts.

University of Madras—First Examination in Arts.

University of Bombay—Matriculation Examination.

Punjab University—Intermediate Examination in Arts.

University of Allahabad—Intermediate Examination in Arts.

Ceylon Medical College—Preliminary Examination.

\* \* (A) No Certificate from the Indian (and Colonial) Bodies in the foregoing Section is accepted unless it shows that the Examination has been conducted by or under the authority of the Body granting it, includes all the subjects required by the General Medical Council, and states that all the subjects of Examination have been passed at one time ; and copies of the form of the required Certificate are supplied by the Registrar of the Council, 299, Oxford Street, London, W., for the purpose.

(B) In the case of Natives of India or other Oriental countries whose vernacular is other than English, an Examination in a classical Oriental language may be accepted instead of an Examination in Latin.

#### PRELIMINARY EXAMINATION.

The subjects, of which proof of efficient knowledge must be produced by applicants for registration as Medical Students, are as follows :—

(A) ENGLISH : Grammar ; Paraphrasing ; Composition ; questions on English History and Geography.

(B) LATIN : Translation into English from unprescribed Latin books ; Translation into Latin of a continuous English passage, and of short idiomatic English sentences. In the case of NATIVES OF INDIA or other Oriental countries, whose vernacular is other than English, a classical Oriental language may be accepted as equivalent to Latin.

(C) MATHEMATICS : Arithmetic ; Algebra, including easy Quadratic Equations ; Geometry, including the subject matter of Euclid, Books I., II., III., and Simple Deductions.

(D) One of the following subjects :—(1) GREEK : Grammar ; Translation into English from unprescribed Greek books ; translation into Greek of short idiomatic sentences ; or (2) A MODERN LANGUAGE, Grammar ; Translation into English from unprescribed books ; Translation of a continuous English passage, and of short idiomatic English sentences.

#### PROFESSIONAL STUDY.

The course of professional study after registration should occupy at least five years : the final Examination in Medicine, Surgery and Midwifery, must not be passed before the close of the fifth academic year of medical study.

The first four of the five years should be passed at a

School or Schools of Medicine recognised by any of the Licensing Bodies mentioned in Schedule A of the Medical Act (1858), provided that the first year may be passed at a University or Teaching Institution, recognised by any of the Licensing Bodies, where the subjects of Physics, Chemistry, and Biology are taught.

Graduates in Arts or Science of any University recognised by the Medical Council who shall have spent a year in the study of Physics, Chemistry, and Biology, and have passed an Examination in these subjects for the Degrees in question shall be held to have completed the first of the five years of medical study.

The fifth year should be devoted to clinical work at one or more of such public hospitals or dispensaries, British or Foreign, as may be recognised by any of the medical authorities mentioned in Schedule A of the Medical Act (1858), provided that of this year six months may be passed as a pupil to a Registered Practitioner holding a public appointment, or possessing such opportunities of imparting practical knowledge as shall be satisfactory to the medical authorities.

Due time shall be set aside for Practical Work in the various subjects. Attendance on a Practical Course should be carefully ascertained and certified. By a Practical Course is understood one in which work is done by the Student himself, under the direction of a duly qualified teacher.

Every Candidate for the Final Professional Examination at the end of the fifth year will be required to give evidence that he has had sufficient opportunities of practical study.

The Registrar of the General Council, and of the Branch Council for England, 299, Oxford Street, London, W.—James Robertson, Registrar of the Branch Council for Scotland, 54, George Square, Edinburgh.—Richard J. E. Roe, Registrar of the Branch Council for Ireland, 35, Dawson Street, Dublin, will supply further information.

The REGULATIONS of the Medical Council in regard to the Registration of Medical and Dental Students, including the list of Preliminary Examinations recognised by the Council, may be obtained from Messrs. Spottiswoode and Co., 54, Gracechurch Street, London, E.C. (price sixpence).

For all information as to the REGULATIONS of the various Examining Bodies, with regard to either Preliminary Examination or Professional Courses of Study, for the dates at which these Examinations are held, and for previous Examination Papers (if any) issued or published by them, application should be made to the respective Bodies.

## MEDICAL SCHOOLS.

In London the Medical Student has the choice of many excellent Schools. The Medical Faculty of the London University is now formed of the twelve general hospitals of London to which Medical Schools are attached—St. Bartholomew's, Charing Cross, St. George's, Guy's, King's College Hospital, London Hospital, St. Mary's, Middlesex, St. Thomas's, University College, Westminster, and the London School of Medicine for Women. The teaching arrangements, and accommodation at some of these are better than at others but the Student's choice will depend largely on personal factors. He should, whenever possible, consult a more experienced friend before joining any of them. The Composition Fees vary at different hospitals from £121 to about £170, but a good margin over and above this should be allowed for instruments and extras.

St. Bartholomew's Hospital allows Students to be admitted to residence, on adducing satisfactory evidence as to character. For terms of board and residence, application should be made to The Warden, St. Bartholomew's Hospital and College, London.

Arrangements for the board and residence of Students have also been made in connection with most of the other Hospital Medical Schools, particulars of which can be obtained from the respective Deans.

There are also Metropolitan Ancillary Schools and Hospitals, affording facilities for clinical observation, as, Bethlem Royal Hospital, Hospital for Consumption and Diseases of the Chest (Brompton), City of London Hospital for Diseases of the Chest (Victoria Park), Central London Throat and Ear Hospital (Gray's Inn Road), London Throat Hospital (Great Portland Street, W.), The Metropolitan Ear, Nose and Throat Hospital (Grafton Street, Tottenham Court Road), Hospital for Women (Soho Square, W.), Royal Hospital for Diseases of the Chest (City Road), Royal Ear Hospital (Soho), Great Northern Central Hospital (Holloway Road, N.), New Hospital for Women (144, Euston Road, N.W.), London Temperance Hospital (Hampstead Road), National Hospital for the Paralyzed and Epileptic (Queen Square, W.C.), Queen Charlotte's Lying-in Hospital and Midwifery Training School (Marylebone Road, N.W.), Seamen's Hospital, and London School of Tropical Medicine (Royal Victoria and Albert Docks), Hospital for Sick Children (Great Ormond Street, W.C.), London Ophthalmic Hospital, " Moorfields " (City Road, E.C.), Royal Westminster

Ophthalmic Hospital (King William Street, West Strand), the Royal Eye Hospital (St. George's Circus, Southwark, S.E.), Tottenham Hospital (South Tottenham, N.), Central London Ophthalmic Hospital (Gray's Inn Road, W.C.), St. John's Hospital for Diseases of the Skin (Leicester Square, W.C.), St. Peter's Hospital for Stone and Urinary Diseases (Henrietta Street, Covent Garden), East London Hospital for Children and Dispensary for Women (Glamis Road, Shadwell, E.), Evelina Hospital for Sick Children (Southwark Bridge Road, S.E.), Victoria Hospital for Children (Chelsea, S.W.), West London Hospital (Hammersmith Road, W.), North-Eastern Hospital for Children (Hackney Road, Bethnal Green, E.), North-Western London Hospital (Kentish Town Road, N.W.).

Most of these Hospitals admit Students for lectures or practice during three or six months at fees of from two to five or eight guineas.

The following Provincial Universities have separate faculties of Medicine, with special facilities for Clinical Studies in their respective local Hospitals, Oxford, Cambridge, Wales (Cardiff), Birmingham, Bristol, Durham, Leeds, Liverpool, the Victoria University of Manchester, Sheffield; and, in addition most of the provincial Hospitals of over 150 beds are available for Clinical Study.

The following provincial hospitals are especially recognised by the English Royal Colleges for a part of the required attendance on medical and surgical practice for Medical Clerkships and Surgical dresserships:—

Bath Royal United Hospital; Bedford County Hospital; Bradford Royal Infirmary; Sussex County Hospital, Brighton; Kent and Canterbury General Hospital, Canterbury; Derbyshire Royal Infirmary, Derby; Royal Devon and Exeter Hospital, Exeter; West of England Eye Infirmary, Exeter; The Gloucestershire Royal Infirmary and Eye Institution, Gloucester; North Staffordshire Infirmary and Eye Hospital, Hartshill, Stoke-on-Trent; Hull Royal Infirmary; Leicester Infirmary; Northampton General Hospital; Norfolk and Norwich Hospital; Nottingham General Hospital; South-Devon and East Cornwall Hospital, Plymouth; The Royal Hospital, Portsmouth; Royal Berkshire Hospital, Reading; Salisbury General Infirmary; Salop Infirmary, Shrewsbury; Royal South Hants and Southampton Hospital, Southampton; Staffordshire General Infirmary, Stafford; Royal Hants County Hospital, Winchester; Wolverhampton and Staffordshire General Hospital, Wolverhampton; Worcester General Infirmary; York County Hospital.

In Scotland, besides the Universities of Edinburgh, Glasgow, St. Andrew's, and Aberdeen, there are the following:—The School of Medicine of the Royal Colleges, Edinburgh; Anderson's College Medical School, Glasgow; St. Mungo's College and Glasgow Royal Infirmary; Glasgow Western Medical School; Queen Margaret College (Women's Department of the University of Glasgow); the University College and Royal Infirmary, Dundee; and the Royal Infirmary, Aberdeen.

In Ireland: At Dublin, the Rotunda Hospital, and other Hospitals, &c.; the Royal College of Surgeons in Ireland (Schools of Surgery); the Universities of Dublin and Belfast; and the National University of Ireland, with affiliated Colleges at Dublin, Cork, and Galway; and the Catholic Medical School, Cecilia Street, Dublin.

Students are recommended to consider well in regard to their selection of a Medical School. While large schools have certain advantages, a small school may in some cases suit a Student better, as enabling him to have more individual instruction, and more opportunities of practical work.

#### MEDICAL SCHOOLS FOR WOMEN.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN, 8, Hunter Street, Brunswick Square, W.C., prepares Women Students for the various Examinations which are open to Women—such as the Degrees and Diplomas of the Universities of London, Durham, Glasgow, and of the Royal University of Ireland; of the Conjoint Boards of Scotland and Ireland, and the Society of Apothecaries, London. The Fee for the medical course for the University of London, after the completion of the Preliminary Scientific year, is £135 in one sum, or £145 in four instalments. The fee for the Preliminary Science Classes is £25. The fee for the course for the University of Durham, the Society of Apothecaries, and the Conjoint Colleges of Scotland, including Elementary Science, is £140 in one sum, or £150 in four instalments. It must be remembered that the necessary supply of instruments is expensive. For further particulars apply to the Secretary, Miss L. M. Brooks, 8, Hunter Street, W.C.

THE MEDICAL COLLEGE FOR WOMEN, 30, Chambers Street, Edinburgh. Founded and conducted by the Scottish Association for the Medical Education of Women. All the Teachers are duly qualified Lecturers of the School of Medicine of Edinburgh. Qualifying for graduation in the University of Edinburgh, and in connection with the Royal Infirmary. Fees, about £100.



THE GLASGOW SCHOOL OF MEDICINE FOR WOMEN forms part of Queen Margaret College, the Women's Department of the University of Glasgow, and is governed by the University Court. The classes are held in Queen Margaret College, apart from those of the male Students of the University, and include a full curriculum of five years for the Degrees in Medicine of Glasgow University. Being University Classes, Certificates of Attendance thereon may be used by Candidates for Degrees of London University, Victoria University, and the Royal University of Ireland, as well as for the Triple Qualification of the Scottish Corporations. The fee for the whole curriculum of lectures, including special subjects, laboratory work, and hospital attendance, each subject being charged separately, amounts to nearly £100. HON. SEC., Queen Margaret College, Glasgow.

The above Schools admit women only. Women are also admitted, in mixed classes, to the Schools of Medicine conducted in connection with the Universities of Dublin, Durham, Liverpool, Manchester, Birmingham, Leeds, Sheffield, and Aberdeen; the Catholic University, Dublin, Bristol University College, and also to special classes at the School of Medicine of the Royal Colleges, Edinburgh; the Schools of Surgery of the Royal College of Surgeons in Ireland, and of the Queen's Colleges of Belfast, Cork, and Galway. Students of the University of Glasgow receive their education at Queen Margaret College, which is an integral part of the University. Two years only of the medical curriculum can be taken at the United College, St. Andrew's; the remaining three years are taken at University College, Dundee, where the whole five years can be passed, if desired. Women can also attend classes for the first three years of the medical curriculum at University College, Cardiff.

#### UNIVERSITY OF LONDON.

Under the regulations of the University of London, as now constituted, the degrees obtainable in the Faculty of Medicine are those of Bachelor of Medicine and Surgery, Master of Surgery, and Doctor of Medicine in six different branches.

Students of the University may be either Internal or External. An Internal Student is one who, having Matriculated at the University, or otherwise obtained registration as an undergraduate, is pursuing a course of study approved by the University in one or more of the London Schools of Medicine, or under one or more of the teachers of the University. The London School of Tropical Medicine and the Lister Institute

of Preventive Medicine are also recognised as schools of the University in special departments. An External Student is an undergraduate who is pursuing his education in some other way.

The Faculty of Medicine grants the joint degrees of M.B., B.S. (Bachelor of Medicine and Surgery), and the higher separate degrees of M.D. (Doctor of Medicine) and M.S. (Master of Surgery),

The curriculum for the medical degrees extends from five to five and a half years from the time of matriculation, except in the case of students who have passed the Preliminary Scientific Examination or the First Examination for Medical Degrees before July, 1910, and the examinations entitled the First, Second, and Third Examinations for Medical Degrees.

A. INTERNAL STUDENTS.—In order to be admitted to the Bachelor's degrees a Student must normally, after registration as an internal student, have : (1) Attended prescribed courses of study for five and a half years in one or more schools of the University. (2) Passed the following examinations, under the conditions mentioned below : (a) The First Examination for Medical Degrees in Inorganic Chemistry, Physics, and General Biology ; (b) the Second Examination for Medical Degrees : Part I., Organic and Applied Chemistry ; Part II., Anatomy, Physiology, and Pharmacology, including Pharmacy and Materia Medica ; (c) the Third Examination for Medical Degrees, or M.B., B.S. Examination in Medicine, including Therapeutics and Mental Diseases, Surgery, Midwifery and Diseases of Women, Pathology, Forensic Medicine and Hygiene.

B. EXTERNAL STUDENTS.—To be admitted to the Bachelor's degrees an external student must (1) have passed the Matriculation examination or have been exempted therefrom not less than five and a half years previously ; (2) have passed subsequent examinations similar to those required of an internal student ; and (3) have been engaged in professional studies during the five and a half years subsequently to Matriculation and four and a half years subsequently to passing the First Examination for Professional Degrées at one or more of the medical institutions or schools\* recognised by this University for the purpose, one year at least of the four and a half years to have been spent in one or more of the recognised institutions or schools in the United Kingdom.

THE FIRST EXAMINATION FOR MEDICAL DEGREES (INORGANIC CHEMISTRY, PHYSICS, AND GENERAL BIOLOGY) will take place twice in each year, commencing on the Monday following

December 10th and on the second Monday in July. It must as a rule be passed by internal students not less than one academic year after matriculation and by external students not less than nine months after matriculation. Candidates, however, who have passed or been admitted as exempt from matriculation in the preceding January will be admitted to the first examination for medical degrees in July as external students, or as internal students if they have attended the prescribed course of study throughout the session and obtained the consent of the authorities of their school or institution. Every candidate must apply (internal students to the academic registrar and external students to the external registrar) for a Form of Entry on or before Nov. 1st or May 24th, which must be returned, accompanied by the proper fee, not later than November 8th for the December examination or June 1st for the July examination. The fee is £5 for each entry to the whole examination, provided that all the subjects are taken at one time. When less than the whole examination is taken at one time it is £2 for each subject. The examination will include two papers in each of the three subjects, three hours being allowed for each paper. Three hours each will be devoted to practical examinations in Inorganic Chemistry and Physics and six hours to a practical examination in General Biology. *Candidates must, at their first entry, present themselves in all three subjects.* Candidates failing in one subject only may, with permission, present themselves for re-examination in that subject on payment of the proper fee.

\* The University accepts Certificates for the complete course of Medical Education from the following Institutions, among others :—The Grant Medical College, Bombay; the Bengal Medical College, Calcutta; the Medical College, Madras; and the Medical College, Colombo.

THE SECOND EXAMINATION FOR MEDICAL DEGREES (PART I.): ORGANIC CHEMISTRY.—This examination will take place twice in each year, commencing on the Thursdays following the third Monday in March and the second Monday in July. No candidate will be admitted to this examination within six months of having passed the First Examination. Every candidate must apply on or before February 8th or May 24th for a form of entry, which must be returned not later than February 15th for the March examination or June 1st for the July examination. The fee is £2 for the first and every subsequent entry. The examination will consist of a paper and practical work, and may include oral questions in Organic

Chemistry, which is "to be treated in an elementary manner, and with special regard to its applications in physiology, pharmacology, and pathology."

THE SECOND EXAMINATION FOR MEDICAL DEGREES (PART II.) takes place twice every year, commencing on the third Monday in March and on the first Monday in July. The subjects of the examination are Human Anatomy and Embryology, Physiology, and Pharmacology, including Pharmacy and Materia Medica. No candidate shall be admitted to the examination unless he has passed the First Examination for Medical Degrees at least 18 months previously, and has passed Part I. of the Second Examination for Medical Degrees. Internal students must have completed the courses of study prescribed for them by the University, and external students must produce certificates of having, subsequently to having passed the First Examination for Medical Degrees, been students during one and a half academic years at one or more of the medical institutions or schools recognised by the University, and of having attended (1) a course of not less than 100 lectures and demonstrations on Human Anatomy; (2) a course of Dissections for not less than 12 months; (3) a course of not less than 60 lectures on Physiology; (4) adequate courses of Experimental Physiology, Histology, and Physiological Chemistry; (5) adequate courses of lectures and demonstrations on Pharmacology, Pharmacy, and Materia Medica; and (6) Practical Pharmacy for not less than two months. These certificates must be transmitted to the Registrar not later than February 15th or June 1st for the March and July examinations respectively, applications for forms of entry having been made by February 1st or May 17th. The fee for each entry to the whole examination is £8; for re-examination in one subject, £4.

M.B., B.S. EXAMINATION.—The M.B., B.S. examination takes place twice in each year, commencing on the last Monday in October and on the first Monday in May. No candidate except those who pass the Preliminary Science or first Examination for Medical Degrees before July, 1910, will be admitted to this examination within three academic years from the date of passing in Anatomy and Physiology at the Second Examination (Part II.), nor unless he has completed that examination together with prescribed courses of study or practice summarised below. (1) Principles and Practice of Medicine; (2) Clinical Methods and Physical Diagnosis; (3) Insanity (with clinical demonstrations at a

recognised Asylum); (4) Therapeutics; (5) Vaccination; (6) Principles and Practice of Surgery; (7) Operative Surgery, Surgical Anatomy, Practical Surgery, and the Administration of Anæsthetics; (8) Diseases of the Eye, Ear, and Throat; (9) Lectures and Demonstrations on Midwifery and Diseases of Women; (10) Practical Midwifery, the conduct of at least 20 Labours, and practice as a Clinical clerk in Gynæcological work; (11) Pathology and Bacteriology; (12) work of the Post-mortem room; (13) Forensic Medicine; and (14) Hygiene. He must also have attended the Medical and Surgical practice of a recognised hospital for two years and a course of instruction at a recognised Fever Hospital for two months. He must have had clinical instruction and must have held the posts of medical clinical clerk and surgical dresser for periods of six months each. For internal students the above form the subjects of the last two and a half years of study as prescribed by the University. Forms of entry for the examination must be applied for on or before September 21st or March 24th and returned with certificates of having undertaken the above-mentioned courses of study by September 28th or April 1st respectively. Candidates will be examined in Medicine (including Therapeutics and Mental Diseases), Pathology, Forensic Medicine and Hygiene, Surgery, Midwifery, and Diseases of Women. The subjects may be divided into two groups—namely: (1) Medicine, Pathology, Forensic Medicine, and Hygiene; and (2) Surgery, Midwifery and Diseases of Women. These groups may be taken either separately or together. The fee is £10 for each entry to the whole examination and £5 for examination or re-examination in either group. There will be no separate examination held for Honours, but the list of candidates who have passed will be published in two parts—namely, an Honours list and a Pass list. Bachelors of Medicine of this University who graduated in or before May, 1904, may obtain the B.S. degree by passing the Surgical part of the M.B., B.S. examination.

**DOCTOR OF MEDICINE.**—The examination for this degree takes place twice in each year, commencing on the first Monday in December, and on the first Monday in July. Candidates must have taken the degrees of M.B., B.S. not less than two years previously, but for those who have taken the M.B., B.S. degrees with honours or have done certain original work this period of delay may be reduced to one year. Candidates who have obtained their M.B. degrees in or before May, 1904, will not be required to hold the degree of B.S. before seeking the doctorate. They may present themselves

for examination in one of the following branches, namely : (1) Medicine ; (2) Pathology ; (3) Mental Diseases ; (4) Midwifery and Diseases of Women ; (5) State Medicine ; and (6) Tropical Medicine. In most branches an appointment at an approved hospital is necessary. Certain conditions have to be fulfilled in each case, varying according to the nature of the branch in question. Candidates who have passed or presented themselves for the M.D. examination in one branch may present themselves for examination in another branch at a subsequent examination. Any candidate for the degree of M.D. may transmit to the Registrar, not less than two months before the commencement of the examination, a thesis or published work having definite relation to the branch of Medicine in which he is a candidate, and if the thesis be approved by the examiners the candidate may be exempted from the written examination in that subject. The fee is £20, and for re-examination £10.

NOTE.—In and after the session 1910-11 with regard to the regulations for internal and external students in the Faculty of Medicine the following will apply. In Branches I. and IV. candidates (other than those who present a thesis) for the July examination must apply to the Academic or External Registrar for forms of entry on or before May 20th, which must be returned not later than June 1st, and candidates (other than those who present a thesis) for the December examination must apply for forms of entry on or before October 20th, which must be returned not later than November 1st. The corresponding dates for application for, and return of, forms of entry for candidates in Branches II., III., V., and VI., and candidates in other branches who present a thesis, are April 20th and May 1st for the July examination ; and September 20th and October 1st for the December examination. Forms of entry must be returned duly filled up, accompanied by the proper fee, and by certificates, as enumerated below, for the branch concerned.

MASTER IN SURGERY.—The examination for the degree of Master in Surgery takes place twice in each year and commences on the first Monday in December and on the first Monday in July. Candidates must produce certificates of having taken the degrees of M.B. and B.S. not less than two years previously (with certain exemptions, as in the examination for the M.D.) and of having subsequently held for at least six months a resident or non-resident Surgical hospital appointment. The examination is conducted by means of printed papers and *viva-voce* interrogation, and the

subjects are Surgery, Surgical Pathology and Anatomy, a Clinical examination, and operations on the dead body. Any candidate for the degree of M.S. may transmit to the Registrar, not later than two months before the commencement of the examination, a thesis or published work having definite relation to Surgery, and if the thesis be approved by the examiners the candidate may be exempted from the written examination in Surgery. The fee is £20, and for re-examination £10.

Full details of the prescribed curricula of study, with the syllabus for each examination and of certain exemptions which the Senate has power to grant in respect to certain examinations and the courses of study presented for them, and the names of the recognised Internal and External Schools of the University, can be obtained free on application to the Academic Registrar, University of London, South Kensington, S.W. Students should apply direct to the University for this detailed information.

## OTHER ENGLISH MEDICAL SCHOOLS.

### UNIVERSITY OF OXFORD.

There are two Degrees in Medicine (B.M. and D.M.) and two Degrees in Surgery (B.Ch. and M.Ch.). The Degrees B.M. and B.Ch., may, under favourable circumstances, be obtained in six or seven years from Matriculation. They are conferred only on candidates who have taken the B.A. Degree, for which residence for three years within the University is necessary; the examinations, however, for the degrees in Arts and Medicine may be passed in any order, provided the regulations are complied with. The most convenient course for the B.A. Degree for intending graduates in Medicine is to take Responsions, the Preliminary Science Examinations, and the Final Honour School of Physiology.

### UNIVERSITY OF CAMBRIDGE.

Most of the Medical Students who desire to take the Bachelor of Medicine Degree (M.B.) of this University take first the Natural Sciences Tripos, or some other Tripos, for which residence for three years within the University is necessary.

Cambridge is now a complete School of Medicine. All the requisite Lectures and Hospital practice may be attended there. For the M.B. Degree five years study is required.

The Medical Degrees conferred are :—Bachelor of Medi-

cine (M.B.), and Bachelor of Surgery (B.C.); also Doctor of Medicine, and Master of Surgery.

Full information can be obtained from "The Cambridge University Calendar."

#### UNIVERSITY OF DURHAM.

The University of Durham grants six degrees in the Medical Faculty—M.B., M.D., B.S., M.S., B.Hy., D.Hy. The Degrees of M.D., B.S., and M.S. are granted only to M.B. graduates of the University. The Degrees of B.Hy. and D.Hy. are granted under certain conditions to graduates in medicine of recognised Universities. The University also grants a diploma in Public Health. These degrees are open both to men and women.

DOCTOR OF MEDICINE (M.D.) (without residence).—The University of Durham has instituted a special examination whereby the degree of Doctor of Medicine may be obtained without residence. Candidates shall not be under 40 years of age and shall have been in active practice for 15 years as registered medical practitioners. They shall produce certificates of moral character from three registered members of the medical profession, and if they have not passed an examination in Arts previously to the Professional Examination in virtue of which they have been placed on the Register, they shall be required to pass in Classics and Mathematics. Candidates who have passed an examination in Arts previously to being placed on the Register are required to pass an examination in Latin. They will be examined in the Principles and Practice of Medicine, including Psychological Medicine, Hygiene, and Therapeutics, the Principles and Practice of Surgery, Midwifery, and Diseases of Women and Children, Pathology (Medical and Surgical), Anatomy (Medical and Surgical), Medical Jurisprudence, and Toxicology. The Fee will be 50 guineas, of which 20 guineas will be retained if the candidate fails to satisfy the examiners.

For the ordinary degrees of M.B. and B.Ch. it is required that at least one of the five years of professional education shall be spent in attendance at the University College of Medicine, Newcastle-upon-Tyne.

#### UNIVERSITY OF LEEDS.

The Degrees granted in the Medical Faculty of this University are Bachelor of Medicine and Bachelor of Surgery (M.B. and Ch.B.), Doctor of Medicine (M.D.), and Master of Surgery (Ch.M.). Candidates must pass the Matriculation Examination, but exemption from the Examination may be



granted to applicants holding certificates of having passed examinations of a standard deemed by the Matriculation Board to be at least equal to the Board's Examination.

Candidates for the M.B. must have attended courses of instruction approved by the University for not less than five years, two at least of such years having been passed in the University subsequently to the date of passing the First Examination.

The Medical School forms the teaching centre of the Medical Faculty of the University of Leeds, and is situated in immediate proximity to the General Infirmary where Students sufficiently advanced receive their clinical instruction. The buildings were opened in 1894, and contain excellent dissecting rooms, several well-arranged laboratories for Physiology, Pathology, and Bacteriology, three lecture theatres, and several smaller classrooms. In addition there are a library and reading room and two museums, one being devoted to Pathology and the other to Anatomy. The comfort of the students is secured by a common-room and a refectory in which they can take meals. It is estimated by the authorities that the approximate cost of medical education to a Student in this University is £188, plus, of course, the expenses of living during the five years covered by the curriculum. The General Infirmary has 482 beds in constant use, and includes gynaecological and ophthalmic wards and a large new out-patient department. The Ida Semi-Convalescent Hospital and Robert Arthington Hospital, Cookridge, attached to the Infirmary, has over 40 beds. The West Riding Lunatic Asylum at Wakefield is open for the study of Mental Diseases. Students can, in addition, attend the practice of the Leeds Public Dispensary (where the practical instruction in dental subjects is also given), the City Fever Hospitals (100 beds), the Hospital for Women and Children, and the Leeds Maternity Home.

Further information may be obtained from the Dean.

THE UNIVERSITY OF BIRMINGHAM grants the degrees of M.B., Ch.B., M.D., Ch.M. The course for the Bachelor degrees extends over five years, from the date of registration with the General Medical Council. As a rule the first four of these years must be spent in the University, but the Senate has power of recognising attendance at another University as part of the attendance qualifying for these degrees, and of recognising examinations passed at such other Universities as exempting from the examinations in Chemistry, Physics, and Elementary Biology. In the case of such students at least

three years must be spent in attendance upon classes at the University. The fifth year may be spent at any school or Schools of Medicine recognised by the University.

**THE UNIVERSITY OF LIVERPOOL.**—Students must pass either the University Matriculation examination or some other approved examination. The course of professional study subsequent to passing the Matriculation Examination and having been registered as a medical student extends over five years, and candidates for the degree of M.B., Ch.B., must pass at least two of the five years of medical study in the University, and one year at least must have been passed in the University subsequent to the date of passing the first examination. No candidate will be admitted to the degrees of M.D., Ch.M., unless he has previously received the degrees of M.B., Ch.B., and at least one year has elapsed since he passed the examinations for those degrees.

**VICTORIA UNIVERSITY OF MANCHESTER.**—Four degrees in Medicine and Surgery are conferred by the University, viz., M.B., Ch.B., M.D., Ch.M.: all candidates for such degrees are required to pass the Matriculation Examination or to have passed such other examination as may be recognised by the University for this purpose. Candidates for the degrees of M.B., Ch.B., must have pursued a course of study acquired at the University during a period of not less than five years, subsequent to the date of their registration by the General Medical Council, two of such years having been passed in the University and one year at least having been passed in the University subsequent to the date of passing the first M.B. examination.

The degree of M.D. is conferred upon candidates who have received the degrees of M.B. and Ch.B. after at least one year has elapsed since they passed the examination for those degrees. The degree of Ch.M. is conferred in like manner.

**THE UNIVERSITY OF SHEFFIELD.**—Candidates for a medical degree must have matriculated in the University, or have passed some other approved examination. Degrees in the Faculty of Medicine are M.B., Ch.B., M.D., Ch.M. A candidate for the degrees of M.B., Ch.B., must pursue a course of study extending over at least five years, three of such years having been passed in the University, and one year in the University subsequent to the date of passing the first examination.

**THE UNIVERSITY OF BRISTOL.**—The medical degrees of this University are similar to those in other Universities. The regulations for obtaining such have not yet been pub-

lished, but they will doubtless be on the lines found in other provincial Universities.

### THE SCOTTISH UNIVERSITIES.

(EDINBURGH, GLASGOW, ABERDEEN, ST. ANDREWS.)

The regulations of all these Universities are the same for Medical Degrees. Two of the five years of medical study must, however, be spent in the University from which the candidate takes his degree. The following regulations of the University of Edinburgh may be taken as an example of all the Scotch Universities.

Every Student, before commencing his medical studies, is required to pass a Preliminary Examination in (1) English, (2) Latin, (3) Elementary Mathematics, and (4) Greek or French or German; but an Indian Student may substitute any other classical language for Latin or Greek, and his native language for French or German. EXEMPTIONS: Indian Students who present evidence that they have passed examinations which would admit them to Universities in India will be exempted, provided that the evidence shows that they possess a knowledge of English sufficient to follow the lectures with profit, and provided that the examinations in India include all the four subjects stated above; *e.g.*, the Matriculation or Entrance Examination of an Indian University does not exempt unless the candidate has passed in *two* languages; if an Indian student has passed in one language only, in India, he must undergo examination in a second language in Scotland.

The Medical Council has ruled that the Preliminary Examination must be passed before attendance at any medical lectures can be counted.

All Students are required to Matriculate before they can be enrolled in any of the Classes in the University. Matriculation consists in inscribing the name in the Students' Album, and paying an annual entrance fee of £1.

Medical Study may be begun either in October (Winter Session) or in May (Summer Session).

No one is admitted to the degrees of BACHELOR OF MEDICINE and BACHELOR OF SURGERY who has not been engaged in Medical and Surgical Study for five years.

Two of the five years of medical study must be spent in the University of Edinburgh. The remaining three years may be spent in any University of the United Kingdom, or in any Indian, Colonial, or Foreign University recognised for the purpose by the University Court. Of the subjects of study,

16 in number—viz., Anatomy, Practical Anatomy, Chemistry, Practical Chemistry, Materia Medica, Physiology, Practical Physiology, Practice of Medicine, Surgery, Midwifery and Diseases of Women, Pathology, Practical Pathology, Physics, Botany, Zoology, Medical Jurisprudence, and Public Health—not less than eight must be taken in the University of Edinburgh or in some other University of the United Kingdom, or in some Foreign or Colonial University entitled to confer the Degree of Doctor of Medicine, recognised for the purpose by the University Court.

Candidates for Degrees must have attended for at least three academic years the medical and surgical practice of a general hospital which accommodates not fewer than 80 patients and possesses a distinct staff of physicians and surgeons. They must have attended Clinical Surgery during a course or courses extending over not less than nine months, and a similar course of Clinical Medicine during not less than nine months. The Candidate must have attended a course of instruction in Mental Diseases, consisting of not less than six class-room meetings for lectures and demonstrations and ten meetings in the Wards of a recognised Asylum for the Insane; he must have attended a course of 25 meetings on Practical Pharmacy in a University or recognised School of Medicine, or have dispensed drugs for a period of three months in a hospital or dispensary, or in an establishment recognised by the Pharmaceutical Society; he must have attended for at least six months the out-practice of a hospital, or the practice of a dispensary, or of a qualified practitioner. He must have acted as clerk in the medical wards and dresser in the surgical wards of a public hospital for a period of six months in each case; and must also have availed himself of opportunities of studying at a hospital or dispensary Post-mortem Examinations, Fevers, Diseases of the Eye, Operative Surgery, Practical Anæsthetics, and one of the three following, viz. :—Diseases of Children; Diseases of the Larynx, Ear and Nose; and Diseases of the skin. The Candidate must have attended, under the superintendence of a registered medical practitioner, 25 cases of labour, or have attended for three months the practice of a lying-in hospital, or of the maternity department of a general hospital or other public charitable institution and have conducted personally six cases of labour. He must have been properly instructed in Vaccination at a public vaccination station, by a public vaccinator, authorised by the proper Government authority to grant certificates of proficiency in vaccination.

All the Degrees of the Scottish Universities are open to women, who are admitted to graduation in medicine under practically the same conditions as men. The Medical College for Women, 30, Chambers Street; Edinburgh, has been recognised as a Medical School whose courses of instruction qualify for graduation.

The Fees for the four divisions of the Examinations are respectively, 6 guineas, 5 guineas, 4 guineas and 7 guineas, in all £23 2s.

Attendance in Medical Classes in India is accepted as qualifying for Degrees in Medicine. But it is important that Indian Students should ascertain whether the courses that they have attended in India contained the prescribed number of Lectures. If not, the deficiency will have to be supplied.

The M.D. Degree is conferred on Candidates who have obtained the Degrees of M.B. and Ch.B., and are twenty-four years of age, and who can produce certain certificates of clinical work. They have to submit a Thesis on a medical subject. Fee for M.D., £10 10s. Fee for Ch.M., £10 10s.

Any further information relative to the courses of Medical Instruction, and the regulations for Degrees can be obtained from the Dean, Medical Faculty of the respective Universities.

#### MEDICAL DEGREES IN IRELAND.

At the University of Dublin (Trinity College) the usual Medical Degrees and Diplomas are conferred, and also in the National University of Ireland and the University of Belfast, where all Degrees, Honours, Exhibitions, Prizes, and Scholarships are open to women as well as to men.

#### EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND (CONJOINT BOARD).\*

Any Candidate (already registered as a Medical Student) who desires to obtain both the License of the Royal College of Physicians of London, and the Diploma of Member of the Royal College of Surgeons of England, is required to complete five years of professional study, and to pass the Examinations hereinafter set forth. Six months of the curriculum may be spent in an institution recognised by the Board for instruction in Chemistry, Physics, Practical Chemistry, and Biology.

\* The Diploma of Member of the Royal College of Surgeons and the License of the Royal College of Physicians are no longer granted separately.

### PROFESSIONAL EXAMINATIONS.

There are three Professional Examinations, called herein the First Examination, the Second Examination, and the Third or Final Examination (each being partly oral).

These Examinations will be held in the months of January, April, July and October, unless otherwise appointed.

#### THE FIRST EXAMINATION.

The subjects of the First Examination are: Part I. Chemistry and Physics. Part II.—Practical Pharmacy. Part III.—Elementary Biology.

A Candidate may take this Examination in three Parts at different times, or he may present himself for the whole at one time\*.

The Fees for admission to the First Examination are as follows:—

For the whole Examination .. ..	£10	10	0
For re-examination after rejection, Part I.	3	3	0
In each of the other Parts .. ..	2	2	0

A Candidate who shall produce satisfactory evidence of having passed an Examination for a Degree of Medicine in any of the subjects of this Examination conducted at a University in the United Kingdom, in India, or in a British Colony, will be exempt from examination in those subjects in which he has passed.

\* In the case of Students who commence their professional studies after June 1, 1904, certificates must be produced of 180 hours' instruction and laboratory work in chemistry; 120 hours' instruction and laboratory work in physics; and 120 hours' instruction and laboratory work in biology. These courses need not be completed.

#### THE SECOND EXAMINATION.

The Subjects of the Second Examination are Anatomy and Physiology.

Candidates will be required to pass in both subjects at one and the same time.

A Candidate will be admitted to the Second Examination after a lapse of not less than twelve months from the date of his passing Parts I. and III. of the First Examination.

Candidates will be admissible to the Second Examination on production of the required certificates of study, which must be subsequent to passing in two of the three subjects of First Professional Examination.

The Fees for admission to the Second Examination are as follows:—

For the whole Examination	..	..	£10	10	0
For re-examination after rejection	..	..	6	6	0

THE THIRD OR FINAL EXAMINATION.

The subjects of the Final Examination are :—

Part I.—Medicine, including Medical Anatomy, Pathology, Practical Pharmacy, Therapeutics, Forensic Medicine and Public Health.

Part II.—Surgery, including Pathology, Surgical Anatomy, and the use of Surgical Appliances.

Part III.—Midwifery, and Diseases peculiar to Women.

A Candidate may present himself for this Examination in parts or for the whole at one time.

A Candidate who shall have obtained a Colonial, Indian, or Foreign Qualification which entitles him to practise Medicine or Surgery in the country where such Qualification has been conferred, after a course of study and Examination equivalent to those required by the Regulations of the two Colleges, will on production of satisfactory evidence as to age and proficiency in Vaccination, and on payment of the required Fees, be admissible to the Second and Third or Final Examinations without any intervals between them.

The Fees for admission to the Third Examination are as follows :—

For the whole Examination	..	..	£21	0	0
For re-examination after rejection in					
Medicine or Surgery	..	..	5	5	0
In Midwifery	..	..	3	3	0

Every Candidate who shall have passed the Final Examination and who shall have paid the required Fees is, subject to the Bye-Laws of the two Colleges, entitled to receive :—

The Licence of the Royal College of Physicians of London, and

The Diploma of Member of the Royal College of Surgeons of England.

Forms of the required Certificates may be obtained of the Secretary of the Examining Board of England, Examination Hall, Victoria Embankment, London, W.C.

N.B.—Exceptions to the conditions of Admission to the several Examinations can only be granted by the Committee of Management.

A special Regulation is as follows :—Any Doctor or Bachelor of Medicine or Surgery of an Indian or Colonial University recognised from time to time for the purpose, who shall have passed such an Examination or Examinations at his University as shall comprise the subjects of the

First and Second Examinations of the Examining Board in England, and who shall have completed the curriculum of Medical Study required by the Regulations of the Board, will be eligible for admission to the Third or Final Examination of the Board two years after his having passed the said Examination or Examinations; any Candidate so admitted will be required to pay a Fee of Twenty Guineas. Any such Candidate who shall have passed the Third or Final Examination shall on further payment of not less than Twenty Guineas, and subject to the Bye-laws of each College, be entitled to receive the Licence of the Royal College of Physicians of London, and the Diploma of Member of the Royal College of Surgeons of England.

All applications with reference to the Examinations for the Licence of the Royal College of Physicians of London and the Diploma of Member of the Royal College of Surgeons of England, should be addressed to the Secretary, Examination Hall, Victoria Embankment, London, W.C.

Any Communication relating to the Regulations should contain the Candidate's name in full and the date of his registration as a Medical Student.

SOCIETY OF APOTHECARIES OF LONDON,  
WATER LANE, BLACKFRIARS, E.C.

QUALIFYING EXAMINATION FOR THE DIPLOMA IN MEDICINE,  
SURGERY, AND MIDWIFERY.

REGULATIONS.

The Examinations are Primary and Final; the Primary Examination is held quarterly; the Final Examination is held monthly.

THE PRIMARY EXAMINATION.

Part I. includes Elementary Biology; Chemistry, Chemical Physics, including the Elementary Mechanics of Solids and Fluids, Heat, Light, and Electricity; Practical Chemistry and Materia Medica and Pharmacy. A Synopsis indicating the range of subjects in the Examinations will be sent on application.

Part I. may be passed after registration as a Medical Student, but no professional studies commenced before registration will be recognised AS PART of the Medical Course.

Should the Candidate not succeed in passing in all the subjects of the Examination, he will be referred only in the subject or subjects in which he failed.



The subjects may be taken at separate Examinations, and in any order.

Part II. includes Anatomy, Physiology, and History. This Examination cannot be passed before the completion of twelve months' Practical Anatomy with Demonstrations, and these subjects cannot be taken separately, except when the Candidate has previously passed in one.

Evidence must be produced of the Candidate's course of Study; a Schedule for the Primary Examination, to be obtained of the Secretary, must be signed by the Dean of the Medical School or other authority. Candidates will be excused any or all the subjects of the Primary Examination on producing evidence that they have passed equivalent examinations before an examining body recognised by the Society. Candidates referred in anatomy will be required to produce evidence of further work in the dissecting room before being admitted to re-examination.

#### THE FINAL EXAMINATION CONSISTS OF 3 PARTS.

Part I. includes :—

- (A) A written Examination in the Principles and Practice of Surgery, Surgical Pathology, Operative Manipulation, Surgical Anatomy, Instruments and Appliances.

Part II. includes :—

- (B) A. The Principles and Practice of Medicine, including Therapeutics, Pharmacology, and Prescriptions; Pathology and Morbid Histology.  
 B. Forensic Medicine, Hygiene, Theory and Practice of Vaccination; and Mental Diseases.

Candidates passing either of the Sections A or B of Part II. will not be re-examined therein.

Part III. includes :—

- (C) Written and oral Examination in Midwifery, Gynæcology, and Diseases of Newborn Children; Obstetric Instruments and Appliances.

A, B, and C may be taken at separate Examinations and in any order.

#### FINAL EXAMINATION : SECTION II.

Part I.—Clinical Surgery; Part II. Clinical Medicine and Medical Anatomy.

Candidates may enter for Parts I. and II. together or separately.

This Examination cannot be passed before the end of the fifth year.

Certificates are required to be produced prior to the Examinations, a list of which is given in the Regulations.

The fee for the three Examinations is 20 guineas, or 5 guineas for the Primary Examination and 15 guineas for the Final.

For further details apply to the " Secretary to the Court of Examiners, London, E.C."

### THE ROYAL COLLEGES OF SURGEONS AND PHYSICIANS OF EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

The Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow, have made arrangements by which, after one series of Examinations, held in Edinburgh or in Glasgow, or in Edinburgh and Glasgow, the Student may obtain the Diplomas of the three Bodies.

The object of the Joint Examination is to give to Students facilities for obtaining, after one series of Examinations, the qualifications in Medicine, Surgery and Widwifery, of the three Scottish Corporations.

Students passing the Final Examination will be entitled to register three Diplomas under the Medical Acts—viz., Licentiate of the Royal College of Physicians of Edinburgh, Licentiate of the Royal College of Surgeons of Edinburgh, and Licentiate of the Faculty of Physicians and Surgeons of Glasgow.

Female Candidates are admitted to the Examinations.

The three Co-operating Bodies grant their Single Qualifications only to Candidates who already possess another and opposite Qualification in Medicine or Surgery, as the case may be.

N.B.—Under the provisions of the Medical Act of 1886, these Single Qualifications do not confer the right to registration, except as Qualifications additional to those already on the Register.

The curriculum lasts for five years ; the fifth year should be devoted to clinical work at one or more Public Hospitals or Dispensaries, and to the study of Special Diseases. Six months of the fifth year may be passed by the Student as a Pupil of a Registered practitioner possessing such oppor-

tunities of imparting practical knowledge as may be deemed satisfactory by the Committee of Management.

Candidates for the Diplomas of the three Licensing Corporations must have passed the complete Examination in General Education, and have had their names inscribed in the Register of Medical Students instituted by the General Medical Council at the commencement of their professional studies. Students should therefore make sure that this has been done, as disappointment has sometimes arisen through ignorance or neglect on the part of the Candidate of this requirement. Foreign and Colonial Candidates require to be registered as Students, and when they have studied at recognised institutions before coming to this country, subsequent to having passed a registrable preliminary examination, they are recommended when they register to apply to the Registrar to have their registration antedated, so as to cover their course of study.

Candidates shall be subjected to four Professional Examinations :—

**FIRST EXAMINATION.**—This shall embrace the following divisions of subjects—(1) Physics, (2) Chemistry, including Practical Chemistry (3) Elementary Biology. Fees for the whole Examination, £5 ; for each division separately, £3.

**SECOND EXAMINATION.**—The Second Examination shall embrace Anatomy and Physiology (including Histology). Candidates may be admitted at the end of the second year of medical study. Fee, £5.

**THIRD EXAMINATION.**—The Third Examination shall embrace Pathology and Materia Medica with Pharmacy. Fee, 5s.

**FINAL EXAMINATION.**—This shall not be passed earlier than the end of the fifth year of study, and shall embrace the following subjects—(1) Medicine, including Therapeutics, Medical Anatomy, and Clinical Medicine, (2) Surgery, including Surgical Anatomy, Clinical Surgery, and Diseases and injuries of the Eye, (3) Midwifery, and Diseases of Women and of New-born Children, and (4) Medical Jurisprudence and Public Health. Fee, £15.

All Candidates shall be subjected, in addition to the Written and Oral Examinations, to Clinical Examinations in Medicine and Surgery, which shall include the Examination of Patients, Physical Diagnosis, the Clinical Use of the Microscope, Examination of the Urine and Urinary Deposits, Surgical Appliances, Bandages, Surface Markings, etc.

Any Candidate admitted to the Final Examination on the

footing of having passed the earlier Examinations elsewhere, must nevertheless pay the full fees.

There are six periods of Examination annually, four in Edinburgh and two in Glasgow.

Among the Boards whose earlier Examinations are recognised by the Co-operating Authorities are the Universities and Colleges in India and the British Colonies, whose Matriculation Examinations have been recognised by the General Medical Council, whose curriculum of professional study fulfils the requirements of this Board, and whose diplomas are granted upon equivalent Examination to those of this Board, and entitle to practise Medicine or Surgery in the Indian or Colonial dependency in which the Institution is situated.

The following are the names and addresses of the Registrars: In Edinburgh—Mr. James Robertson, Solicitor, 54, George Square. In Glasgow—Mr. A. Duncan, LL.D., Faculty Hall, 242, St. Vincent Street.

## ROYAL COLLEGE OF PHYSICIANS AND ROYAL COLLEGE OF SURGEONS IN IRELAND.

### CONJOINT EXAMINATIONS.

The Examinations are held in April, July, and October of each year.

Every Candidate is required to pass a Preliminary Examination and four Professional Examinations.

All Preliminary Examinations recognised by the General Medical Council are accepted by this Conjoint Board.

Fees.—Total, £42.

All information may be obtained from the Secretary of the Committee of Management, Royal College of Physicians, Dublin.

## THE APOTHECARIES' HALL OF IRELAND.

### EXAMINATIONS.

Every Candidate for the License entitling to registration as a Practitioner in Medicine, Surgery and Midwifery is required to pass a Preliminary Examination and four Professional Examinations.

All Preliminary Examinations recognised by the General Medical Council are accepted by this Conjoint Board.

The Sessional Medical Examinations are held at Dublin, in January, April, July, and October of each year.

Fee—£5 5s. for each Examination.

Candidates who have passed Examinations by other licensing bodies which the Committee of Management consider equivalent, may be exempted from similar Examinations under this scheme.

All information can be obtained from the Registrar, 40, Mary Street, Dublin.

## UNIVERSITY OF BRUSSELS.

British and other practitioners holding registrable qualifications are admissible for the Doctorate of the University of Brussels, without any further curriculum. It is necessary, however, that all candidates should leave their diplomas with the Registrar of the University prior to the Examination, and no one will be admitted until this condition has been complied with. The fees are—For Matriculation, £8 12s.; for 1st Doctorate, £4 8s.; for 2nd Doctorate, £4 4s.; for 3rd Doctorate, £4 8s.; for Legalisation of Diploma, 8s.—£22. The unsuccessful candidates may present themselves again three months after rejection. Candidates who have paid in advance the fees for their three examinations, and are unsuccessful in the first, recover the fees paid for the second and third; those who fail in the second recover the fees paid for the third examination. There are three examinations—viz., 1st Doctorate, 2nd Doctorate, and 3rd Doctorate. Great importance is attached to practical knowledge, but Candidates must also prove that they possess positive theoretical science. The examinations, which are *viva voce*, take place on the first Tuesday in November, December, February, May, and June. Candidates have the option of passing each Doctorate separately or of taking the three at one examination. The time required for the three examinations seldom exceeds ten days. Saturday, before 2 p.m., is the most eligible day for arriving for Candidates with whom time is an object. The examinations are conducted in English.

Further particulars may be obtained on application to the Secretary of the University, Brussels. There is an Association of British Graduates of the Brussels University, and the Honorary Secretary, Dr. F. H. Edwards, of Camberwell House, Camberwell, S.E., will be pleased to give information or receive applications for membership. An article containing a full description of everything concerning the degree was published in the "British Medical Journal" on September 15th, 1888.

## THE DIPLOMA IN PUBLIC HEALTH.

The great value, and in many instances the necessity, which now attaches to the possession of this Diploma by Medical Practitioners practising in India, induces us to add the regulations, etc., under which it can be obtained.

Two Degrees in Science, the B.Sc. and D.Sc. in the Department of Public Health, are given by the Universities of Edinburgh and Glasgow, the Degrees of B.Hy. and D.Hy. by the University of Durham, and the Diploma in Public Health by the Universities of Oxford, Cambridge, Durham, Birmingham, Liverpool, Leeds, Sheffield, Aberdeen, St. Andrews, Dublin, Belfast, and the National University of Ireland, the Royal Colleges of Physicians and Surgeons of London, the Royal Colleges of Physicians and Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow, and the Royal Colleges of Physicians and Surgeons of Ireland. The general regulations under which the Degrees or Diplomas can be obtained are in all cases similar; they are governed by the General Medical Council, which body has issued the following rules relative to the matter:—

Rule 1.—A period of not less than twelve months shall have elapsed between the attainment of a registrable Qualification in Medicine, Surgery and Midwifery, and the admission of the Candidate to any Examination or any part thereof for a Diploma in Sanitary Science, Public Health, or State Medicine.

Rule 2.—Every Candidate shall have produced evidence that, after obtaining a registrable Qualification, he has during six months received practical instruction in a Laboratory or Laboratories, British or Foreign, approved by the Licensing Body granting the Diploma, in which Chemistry, Bacteriology and the Pathology of the Diseases of Animals transmissible to Man are taught.

Rule 3.—Every Candidate shall have produced evidence that, after obtaining a registrable Qualification, he has during six months (of which at least three months shall be distinct and separate from the period of laboratory instruction required under *Rule 2*), been diligently engaged in acquiring a practical knowledge of the duties, routine and special, of the Public Health Administration, under the supervision of certain stated officers.

Rule 4.—Every candidate shall have produced evidence that, after obtaining a registrable Qualification, he has attended during three months the practice of a Hospital for

Infectious Diseases at which opportunities are afforded for the study of Methods of Administration.

☐ Fees for the Diploma at some of the Qualifying Bodies :—

University of Oxford : £5 for each part.

☐ University of Cambridge : £6 6s. for each part.

University of Durham : B.Hy., £16 16s. ; D.Hy., £11 11s. ; D.P.H., £10 10s.

University of Manchester : £5 5s. for each part.

University of Birmingham : £5 for each part.

University of Leeds : £5 5s. for each part.

University of Edinburgh : B.Sc., £3 3s. for each part ; D.Sc., £10 10s.

University of Aberdeen : £5 5s.

Royal College of Physicians and Surgeons, London : £6 6s. for each part.

Royal College of Physicians and Surgeons, Edinburgh, and Faculty of Physicians and Surgeons, Glasgow : £6 6s. for each part.

Royal Colleges of Physicians and Surgeons, Ireland : £10 10s.

(A special examination can be obtained at these Colleges on payment of an extra fee of 15 guineas, except in the months of August and September.)

#### COURSES OF INSTRUCTION.

Courses of instruction in accordance with the foregoing regulations are given in connection with the Medical Departments of the various Universities, and many of the Medical Schools of London.

The following syllabus is issued by the Royal Institute of Public Health, which body is mainly responsible for the Statutory Provisions alluded to by the General Medical Council.

#### THE ROYAL INSTITUTE OF PUBLIC HEALTH.

##### COURSE OF INSTRUCTION FOR DIPLOMA.

PRINCIPAL, PROF. WILLIAM R. SMITH, M.D., F.R.S.ED., ETC.

A.—HYGIENE AND PUBLIC HEALTH.

B.—LABORATORY INSTRUCTION.

*a. Chemistry. b. Bacteriology.*

C.—PUBLIC HEALTH ADMINISTRATION, &C.

A three months' course of instruction will be given in Sanitary Law, Sanitary Engineering, Vital Statistics, and other subjects bearing on Public Health Administration.

## FEES.

The inclusive fee for Sections A, B and C is 15 Guineas.

Bacteriological or Chemical Laboratories, Monthly 4 guineas ; for three months, 10 guineas.

D.—PRACTICAL SANITARY WORK.

E.—INSTRUCTION IN FEVER HOSPITAL ADMINISTRATION.

Facilities are afforded at the Plaistow Hospital, E., for obtaining this instruction. Applications should be addressed to Dr. Biernacki, Medical Superintendent. Fee, £2 2s.

Also at the Hospitals of the Metropolitan Asylums Board, where the position of Clinical Assistant for a period of three months can be obtained, board and residence being given without charge.

## DENTAL [SURGERY.

Candidates for a Diploma in Dental Surgery must produce certificates of having been engaged during four years in Professional Studies, and of having received three years' instruction in Mechanical Dentistry from a registered Practitioner, or at some Dental Hospital where instruction is given in this subject.

One year's *bona fide* apprenticeship with a registered Dental Practitioner, or one year's instruction at a Dental Hospital, after being registered as a Dental Student, may be counted as one of the years of Professional Study. The three years of instruction in Mechanical Dentistry, or any part of them, may be taken by the Medical Student, either before or after his registration as a Student ; but no year of such mechanical instruction will be counted as one of the four years of professional study unless taken after registration.

Professional study prior to the date of registration as a Dental Student is not recognised except in the case of Chemistry, Physics, and Practical Chemistry, and of instruction in the details of Mechanical Dentistry.

Medical and Surgical Practitioners are entitled to practise as Dentists, but it is of great advantage to a Dentist to take a Diploma or License in Dental Surgery (L.D.S.).

The Dental Schools in London are : The Dental Hospital of London ; The National Dental Hospital and College ; Guy's Hospital ; and the London Hospital Dental Schools. There are also Dental Hospitals in Scotland, and in many Provincial Towns.

Approximately the Fees for instruction in Dentistry vary from £63 to £81 ; and for Examination, from 20 to 25 guineas.



## THE ROYAL SANITARY INSTITUTE.

This Institute holds examinations and grants certificates which are officially recognised by the Local Government Board and other authorities. They include examinations :

In Sanitary Science as applied to Buildings.

For Sanitary Inspectors, Inspectors of Meat and Inspectors of Nuisances, &c., &c.

A practical, as well as theoretical, knowledge of Sanitary questions is required ; the fee for most of the examinations is £3 3s. od., and the certificates in most cases are not granted to persons under 21 years of age.

Further information can be obtained from the Royal Sanitary Institute, Parkes Museum, Margaret Street, W.

## ROYAL VETERINARY COLLEGE, CAMDEN TOWN, LONDON.

Every Candidate for the Diploma of the Royal College of Veterinary Surgeons must, before admission as a Student, pass an Examination in General Education. The subjects to be included in the Preliminary Examination in General Education shall be as follows :—

1. English Language, including Grammar, Composition, and English History and Geography.
2. Latin, including Grammar, Translation from unspecified authors, and Translation of English passages into Latin.
3. Mathematics, comprising (A) Arithmetic, (B) Algebra, including easy Quadratic Equations ; (C) Geometry, the subject matter of Euclid, Books I., II. and III., with easy deductions.
4. One of the following optional subjects : Greek, French, German, or any other Modern Language.

In the case of natives of India or other Oriental countries whose vernacular is other than English an examination in a classic Oriental Language may be accepted instead of an examination in Latin.

The preliminary Examination is held in April, July and September of each year. Students are strongly advised to enter the College at the beginning of the Winter Session in October. They will be required to produce a testimonial of good character before being admitted.

Candidates who have passed the Matriculation of any of the Indian Universities will be exempted from the Preliminary Examination.

No one can be admitted into the College under the age of

16. The Course of Study for the diploma extends over a period of four years, during which four examinations have to be passed. The year is divided into two Sessions. The Winter Session will consist of two Terms, the first to include October, November and part of December ; and the second January, February, and part of March. The summer Session will include May, June, and part of July.

The attendance of each Student at Lectures is regularly marked. At the close of each Division of the Winter Session and at the close of the Summer Session the Dean prepares a report of the attendance, general character and conduct of each Student, which is forwarded to his Parent or Guardian, after being submitted to and signed by the Principal.

The Educational or Entrance Fee of 80 guineas, which covers attendance on four years' course of instruction, may be paid in four instalments, all in advance, viz :— 20 guineas on entry, 20 guineas at the end of the first year, 20 guineas at the end of the second year, and 20 guineas at the end of the third year. A Fee of 1 guinea to the Library and Reading Room Fund must also be paid prior to entry, and a further Fee of 10s. 6d. annually.

The University of London confers a Degree in Veterinary Science (B.Sc.). This requires a course of four years after passing the London Matriculation.

## THE ROYAL COLLEGE OF VETERINARY SURGEONS, QUEEN'S SQUARE, LONDON.

The College grants two Diplomas: a Fellowship (F.R.C.V.S.) and a Membership (M.R.C.V.S.).

There are four professional examinations for the Membership, which embrace the following subjects :—

(A) Anatomy of domesticated animals (bones, ligaments, joints), Chemistry and Elementary Physics, Biology, Elementary Zoology, and Botany.

(B) Anatomy of domesticated animals (horse, ox, sheep, pig, dog) stable management, and manipulation of domesticated animals, and principles of shoeing.

(C) Morbid Anatomy, Pathology and Bacteriology, Materia medica, Pharmacy, Therapeutics, and Toxicology, Veterinary Hygiene and Dietetics.

(D) Principles and practice of Veterinary Medicine, principles and practice of Veterinary Surgery.

Fee, 21 guineas.

The examination for the Fellowship shall consist of :—

1. The thesis to be accepted or rejected by the Examiners.
2. A written examination on the following subjects :—
  - (a) Veterinary Medicine and Surgery.
  - (b) Veterinary Hygiene and Sanitary Science.
  - (c) Pathology and Bacteriology (recognition of specimens, microscopically and macroscopically).
3. A defence of thesis before the Examiners.

Fee, 25 guineas.

Further particulars can be obtained from the Secretary.

## SCHOOL OF PHARMACY OF THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.

This Institution affords a complete curriculum for the pharmaceutical student, and holds two examinations : (1) the Minor or qualifying examination of the Pharmaceutical Society, the subjects of which are Botany, Chemistry and Physics, Practical Chemistry, Materia Medica, Pharmacy, Practical Pharmacy and Dispensing, and Prescriptions ; (2) the Major examination of the Pharmaceutical Society, the subjects of which are Botany, Chemistry and Physics, Practical Chemistry and Materia Medica. The fees for the elementary course (Oct.—June) amount to £32 11s. od. (or £30 to Student-Associates of the Society), and for the Advanced Course (Oct.—Mar.) £18 18s. (or £18 to Student Associates or Members of the Society) ; the Examination fees for the Minor are Ten Guineas, and for the Major Three Guineas. Further information will be found in the Prospectus of the School of Pharmacy, 17, Bloomsbury Square, London, W.C.

We are requested to add that Professor William R. Smith, M.D., F.R.S.Ed., Principal of the Royal Institute of Public Health, 37, Russell Square, London, will be pleased to see any student desiring information or advice relative to Medical Studies or Work in Great Britain or Ireland.

## ACCOUNTANTS.

### INSTITUTE OF CHARTERED ACCOUNTANTS AND SOCIETY OF ACCOUNTANTS AND AUDITORS.

There are two well-known Societies in England under which Students can qualify as Accountants : The Institute of Chartered Accountants and the Society of Incorporated Accountants and Auditors ; and also the Scottish Chartered Societies. The courses of study for these are all the same.

No person can present himself for the Final Examination unless he has served for five years as an Articled Clerk to a Public Accountant practising in England or Wales (or if he is a graduate of any University of the United Kingdom for a period of three years). No person who is under 16 years of age can be received as an Articled Clerk by a Member of either Society, neither can he be admitted to membership before he is 21.

There are a few members of the Society of Incorporated Accountants and Auditors who carry on the business of Public Accountants in India, to whom Indian students can be articled, but they must attend in England to pass both the Intermediate and Final Examinations, there being no examination centre in India. To become a member of the Institute of Chartered Accountants or of a Scottish Chartered Society a student must serve and qualify in England and Wales or Scotland respectively.

Before being Articled, a Preliminary Examination as a test of general education must be passed, unless one of the exempting examinations has already been passed in the necessary subjects.

The subjects for the Preliminary Examination of both Societies are as follows:—

1. Dictation and English Composition. 2. Arithmetic. 3. Algebra, to Quadratic Equations. 4. Euclid (the first Four Books). 5. History of England and Geography. 6. Latin (Elementary). And two of the following subjects (one of which must be a language): Latin, Greek, French, German, Italian, Spanish, Higher Mathematics, Physics, Chemistry, Animal Physiology, Electricity and Magnetism, Light and Heat, Geology, Stenography.

Indian Examinations are not recognised by the bye-laws of the Institute of Chartered Accountants as exempting from this Examination.

A copy of the list of books selected for the examination of Candidates in the optional subjects will be prepared six months before the Examination and can be obtained by application.

An Intermediate Examination will be held after one-half of the term of service. This Examination will be conducted in writing in the following subjects: (1) Book-keeping and Accounts (including Partnership Accounts); (2) Book-keeping and Accounts (including Executorship Accounts); (3) Auditing; (4) The Rights and Duties of Liquidators, Trustees and Receivers.

The Final Examination at the end of the Service under

Articles cannot be taken in less than two years after the Intermediate Examination (except in the case of graduates of a University who are only serving for three years, by whom it may be taken one year after passing the Intermediate).

The Final Examination in both Societies is conducted in writing in the following subjects :—

(1) Book-keeping and Accounts (including Partnership Accounts) ; (2) Book-keeping and Accounts (including Executorship Accounts) ; (3) Auditing ; (4) The Rights and Duties of Liquidators, Trustees and Receivers ; (5) The Principles of the Law of Bankruptcy, and of the Law Relating to Joint Stock Companies ; (6) The Principles of Mercantile Law, and of the Law of Arbitrations and Awards.

In London premiums on Articles vary from 50 to 500 guineas, according to the status of the firm to whom the Clerk is articulated, an average premium being 200 guineas ; while in the country 50 to 300 guineas is about the rule. In the case of the Scottish Chartered Societies the premium or apprentice fee is £105, and there is another £105 payable to the general fund of the Society on the candidate's admission after the prescribed examinations have been passed, as well as an annual contribution of £5 5s. payable to the Endowment and Annuity Fund of the Society.

The Fee for each Examination in the Institute of Chartered Accountants or of a Scottish Chartered Society is £2 2s. ; in the Society of Incorporated Accountants and Auditors, Preliminary Examination £1 1s., Intermediate £1 11s. 6d., and Final £2 2s.

The Fee for admittance as an Associate of the Institute of Chartered Accountants is £10 10s., or as Associate of the Society of Incorporated Accountants and Auditors £5 5s., and an annual fee of £1 1s. for members not in practice, whilst members in practice if in the Metropolis pay a fee of £2 2s. per annum, if in the Provinces a fee of £1 1s. per annum. There are additional fees on admission to Fellowship.

As changes are sometimes made it would be well to write for further information to the Secretary of the Institute of Chartered Accountants, 34, Moorgate Place, E.C., the Secretary of the Society of Incorporated Accountants and Auditors, 50, Gresham Street, Bank, E.C., or the Secretary of the Society of Accountants in Edinburgh, 23, St. Andrew Square, Edinburgh.

#### THE LONDON CHAMBER OF COMMERCE.

This Chamber holds examinations for Junior and Senior Commercial Education Certificates. The subjects of the

Junior Examination are : English, Handwriting, Arithmetic, a Modern Foreign Language, Commercial Geography, Commercial History and the Elements of Political Economy ; and optional subjects which are grouped as Mercantile, Linguistic, Mathematical or Scientific. The Senior Examination is on similar lines, and among its obligatory subjects are Foreign Languages, including Oriental. For further information apply to the London Chamber of Commerce, Oxford Court, Cannon Street, E.C.

## **ENGINEERING AND TECHNICAL TRAINING.**

The money necessary for an Engineering training, excluding outfit and passage, and premiums for a practical course, but including cost of living, clothing, college fees, holidays, travelling and all incidental expenses, cannot be less than £200 to £220 a year, or Rs. 250 to Rs. 275 per mensem.

The time to be spent in Great Britain will depend on which branch of the profession is adopted, and what funds are provided : it cannot well be less than three years, and need not be more than five. But before the student leaves India he should have received a scientific education in an Indian College, otherwise time and money will be needlessly spent in this country on a preliminary education, that can be as well obtained in India at less cost.

He should have acquired at least a sound and thorough knowledge of pure mathematics—*i.e.*, geometry, algebra, and trigonometry ; some acquaintance with analytical and practical plane geometry, the elements of solid geometry and a working knowledge of the differential and integral calculus and of the simple differential equations. He should, further, have had some instruction in applied mathematics and mechanics, and a general knowledge of elementary physics and chemistry. He should also have learned drawing, especially free-hand and geometrical drawing and practical mensuration.

The engineering profession comprises several distinct branches, for each of which a special training is required. The Indian student coming to this country should therefore decide beforehand which of these he intends to adopt, so that he may save much time and money by selecting the suitable education and training. The branches of engineering which at present offer careers to Indian students, are as follows :—

I. CIVIL ENGINEERING.—(a) Railways, (b) Irrigation, (c) Works, Wharfs and Harbours, (d) Roads and Buildings, (e) Drainage and Sewerage; (f) Water Supply; (g) River Works.

2. MECHANICAL ENGINEERING.—(a) Marine Engines and Dredging Plant, (b) Locomotive Engines, (c) Stationary Steam Power Engines, (d) Oil and Gas Power Engines and Motors, (e) Hydraulic Engines and Machinery, (f) Turbines, Hydraulic and Steam, (g) Pumping Engines and Plant, (h) Textile, Mining and Rolling Mills, Machinery and Plant, (i) Portable Engines and Factory Plant, (j) Aerial Ropeways and Conveying Machinery.

3. ELECTRICAL ENGINEERING.—(a) Electric Railways, (b) Street Tramways, (c) Telegraph, Marconigraph and Telephone, (d) Sighting and Power Plant, (e) Mining Machinery, (f) Textile Machinery, (g) General Workshop Machinery, (h) Telpherage.

4. MINING ENGINEERING.

5. Iron, Steel, Copper and Lead Manufactures; with Allied Industries of Wood and Metal Works.

If the student should elect for the Public Works Department it will be necessary for him to have a generally good knowledge of 1. (a), (b), (d), (e), and (f); 2. (d), with some workshop experience of mechanical engineering; and also of 5. This entails his taking at least a three years' course, or more profitably a four years' course, at one of the many good Engineering Colleges of Great Britain; or he may take a B.Sc. degree in Engineering, which will make him eligible for Associate Membership of the Institution of Civil Engineers.

There are more openings for well-educated and properly-trained mechanical engineers in India than there are for civil engineers. Before long also a large field will be open for employment in electrical engineering in all its sections, (a) to (d), throughout India. For this the student will have to take a five or six years' course of education and training, if he wants to be a master in the profession of electrical engineering, and not a mechanic electrician, which is the fate of many young men at present who have not spent the full time required. To be a good electrical engineer it is necessary, first, to take a three years' course in mechanical engineering, followed by a two years' course in a technical college, combined with electrical shop and test-room work.

The mining industry of India is increasing largely every year, and offers much employment to Indian students. After a four years' course at the Royal School of Mines, and two years spent at the coal, iron, tin and lead mines of this country, the student should be well fitted for undertaking charge of any of the four mining industries above mentioned, and these are certain to be greatly developed before long in India.

It will be some time before the smelting and manufacture of metals will be sufficiently developed to offer careers to trained students. Some enterprises of the kind have started in India, and others are contemplated, but they are far from being established undertakings yet.

Considering the four branches herein mentioned, the first, or civil, requires the shortest time for obtaining the necessary qualifications, either by means of a University degree or a technical college course. This does not, however, complete the training necessary for a civil engineer, and a year or two of a practical course should be undertaken. To obtain this practical training under a civil engineer of some standing and current practice, entails for the Indian student at least an additional year's residence in this country, and an expenditure of one hundred guineas as a premium.

If the Indian student is preparing for the Public Works Department he must, to conform with regulations, have had some knowledge of workshop training, and this he can only acquire by being admitted into one of the many large engineering workshops of this country for at least six months, and more if possible. For this a premium may or may not be required, as some engineering colleges and technical colleges have excellent workshops of their own, and with a four years' course are able to introduce selected students into engineering workshops for three summer courses of six months each. During this workshop course he will have to enter as an apprentice, and work with the workmen of the shops and conform to their hours and rules, which are very strict.

For mechanical engineering the student, after having finished a two years' college course, should enter some good engineering workshop as a premium pupil for three years. He will then be fitted for employment as an assistant locomotive superintendent on an Indian railway—provided, of course, he holds good certificates from his college and the works.

For electrical engineering, he must spend eighteen months in some good engineering workshops, where electrical power engines are built; in the forge, fitting and erecting shops; then eighteen months in some electrical plant manufacturer's works—as Crumptions or Siemens' Brothers—in machine shop, testing room, and drawing office; after which spend one whole year as junior shift engineer in the power house of some large electrical lighting and power company, and another year outside on maintenance of tramways and lighting way and works.

The fully-qualified electrical engineer has better prospects



in India than men of either of the other two branches of the profession. Moreover, it will not be long before the mountain railways of India will have to be worked by hydro-electric power if they are to be worked profitably, while most, if not all, cotton and jute mills will also have to be worked by electricity. So the prospects of an electrical engineer in India are quite good, and sufficiently enticing for the student who is willing to spend time and money on specialising in this branch.

The limit of age for entering Government service in the Public Works Department is 24, so that students specialising for it should begin their course of education and training in Great Britain before they are 20 or 21 years of age in the month of July—according as they propose to take a degree at a University or a technical college course of four years. But if they are adopting the engineering profession with a view to employment with railway companies, municipalities, district boards, or private and other undertakings, they may spend their time in this country up to the age of 25, and even 27, having due regard to all other conditions. As before stated, it is very necessary that Indian students coming here for an engineering education and training should have been thoroughly well educated to the extent already mentioned, otherwise they will find it both difficult and expensive, not to say irksome, to go through a course of school work in this country after the age of 16 or 18.

#### UNIVERSITY ENGINEERING COURSES.

For particulars of Courses of Engineering at some of the Universities, see London pp. 36, 38, Dublin p. 43, Manchester p. 45, Birmingham p. 47, Leeds p. 49.

IMPERIAL COLLEGE OF SCIENCE AND TECHNOLOGY,  
including as integral parts :

- I. The Royal College of Science.
- II. The Royal School of Mines, and
- III. The City and Guilds College.

The purposes of the Imperial College are to give the highest specialised instruction and to provide the fullest equipment for the most advanced training and research in various branches of science, especially in its application to industry.

The courses of instruction are planned so as to extend over four years, and are generally similar for all divisions

during the first year, and to a less extent during the second year, after which they are specialised according to the particular division in which the student is working. Students on entering must specify as far as possible the third year or third and fourth year courses in which they intend to specialise. Those intending to specialise in Civil and Mechanical Engineering or Electrical Engineering will be regarded as students of the City and Guilds College ; in Mining or Metallurgy as students of the Royal School of Mines ; in Mechanics, Physics, Chemistry, Botany, Zoology or Geology as students of the Royal College of Science. Candidates for admission to a first year course must satisfy the authorities of the College that they have received a good secondary education, and must as a rule be not less than 17 years of age.

They are required to show:—

(i.) That in general education they have reached a standard equivalent to that usually marked by University Matriculation ; and

(ii.) That their previous scientific education is such as to enable them to profit from the scientific training given in the course which they desire to enter ; *e.g.*, a knowledge of Elementary Mathematics, Mechanics, Physics and Chemistry sufficient for the University of London Matriculation Examination.

Every student should have acquired some facility in freehand drawing.

Applications for admission to the College must be made on Form 1289, obtainable from the Registrar, and be sent not later than the first week in July for admission in the following October. In this form a statement should be given of the studies which the applicant has already pursued, the examinations he has passed, and the names of a Teacher or Teachers to whom reference may be made. This application will be considered by the Council of the College, who will decide whether or not the Candidate can be admitted.

Students must be free from any organic disease or physical defect that would interfere with their studies.

The Session is divided into two Terms. The first Term begins about the first week in October, and ends about the middle of February. The second term begins in the middle of February, and ends about the beginning of July.

A certain number of Royal Exhibitions, National Scholarships, and Free Studentships tenable at the College are awarded by competition at the Examinations of the Board of Education, South Kensington.

The diploma of the Imperial College of Science and Technology will be awarded only on the satisfactory completion of two years' study in advanced science or technology at the Imperial College, except in cases where the Imperial College recognises for this purpose in associated Universities, &c., courses of study for which the Imperial College does not make provision in any of its own constituent Colleges.

### I. ROYAL COLLEGE OF SCIENCE.

This part of the Imperial College includes the Departments of Mathematics and Mechanics, Physics, Chemistry, Botany, Zoology and Geology.

The complete course extends over 4 years (*i.e.*, 12 terms), and the fees vary according to the course taken, ranging from £5 to £17 a term, and amounting in all to £120 to £150.

The conditions governing the award of the Associateship of the Royal College of Science are subject to revision with regard to the Session 1910-11, and subsequent Sessions.

### II. ROYAL SCHOOL OF MINES.

The courses of study in the Departments of Mining and Metallurgy extend over four years (*i.e.*, 12 terms) and the fees vary from £2 to £13 a term, amounting in all to £140—£150.

Students who enter for the Associateship of the Royal School of Mines in and subsequent to the Session 1908-9 will be required satisfactorily to complete a four years' course of study.

### III. THE CITY AND GUILDS CENTRAL TECHNICAL COLLEGE, EXHIBITION ROAD, S.W.

The object of the Central Institution is to give to London a College for higher technical education, in which advanced instruction shall be provided in those kinds of knowledge which bear upon the different branches of industry, whether Manufactures or Arts.

The main purpose of the instruction given is to demonstrate practically the application of different branches of science to various manufacturing industries.

In order that this instruction may be efficiently carried out, the College comprises laboratories, drawing offices, and workshops; and opportunities are afforded for the prosecution of original research, with the object of the more thorough training of the Students, and for the elucidation of the theory of industrial processes.

The Courses of Instruction are arranged to suit the requirements of—

1. Persons who are training to become Technical Teachers.

2. Persons who are preparing to enter Engineers' or Architects' offices, or Manufacturing works.

3. Persons who desire to acquaint themselves with the scientific principles underlying the particular branch of industry in which they are engaged.

The Entrance or Matriculation Examination for Candidates who desire to qualify for the Diploma, is held in September, and is open to all persons not less than 16 years of age at the date of the Examination. The subjects are: 1. Mathematics and Mechanics (compulsory). 2. Mechanical Drawing. 3. Physics. 4. Chemistry. (Two of these three subjects must be passed.) 5. English. 6. French or German. Fee, £1. The London University Examination, if passed in certain PRESCRIBED SUBJECTS, may be offered in lieu of the Entrance Examination of the College, but a knowledge of Trigonometry is necessary.

Instruction at the College is given in three Departments. 1. Civil and Mechanical Engineering. 2. Electrical Engineering. 3. Chemistry. The course in each Department is of three years. Students select the Department in which they desire to be classed when entering the College.

The Fees for the complete Course of Instruction to be pursued by a Matriculated Student are £36 per Session, payable in advance, or £37 payable in two instalments—£19 in September and £18 in January.

The Diploma Course includes instruction in all four Departments, and is practically the same during the first year for all Students. It is specialised in the second year, to a certain extent, according to the particular branch of industrial work in which the Student expects to be engaged; and in the third year, the Student devotes himself almost exclusively to the work of the Department which he enters.

The Diploma of ASSOCIATE OF THE CITY AND GUILDS OF LONDON INSTITUTE (indicated by the letters A.C.G.I.), stating the industry or branch of Engineering in which each recipient has qualified, is awarded by the Council on the recommendation of the Board of Studies, to Matriculated Students, who have gone through a complete course of instruction as laid down in the programme, and have passed with sufficient merit the several Examinations. The Diploma in either Civil and Mechanical Engineering or in Electrical Engineering is.

accepted by the Council of the Institution of Civil Engineers as exempting from the Examination for Associate Membership (A.M.I.C.E.).

Students wishing to attend Special or Partial Courses, must satisfy the Professors that they possess sufficient knowledge to follow the teaching. The fees for these, including laboratory work, for 1, 2, 3, 4, 5 days in a week, are £7, £9, £11, £12 10s., £14 respectively per term; besides an entrance fee of £2.

The Fellowship, indicated by the letter F.C.G.I., is conferred upon those who, having obtained the Associateship, have spent at least five years in actual practice, and can produce evidence of having done some original and valuable research work, or of having otherwise contributed to the advancement of the industry in which they are engaged.

For further information see the Calendar of the Imperial College of Science and Technology (price 6d., by post 9d.), obtainable from Eyre & Spottiswoode, London, E.C., and the Programme of the City and Guilds Central Technical College, Exhibition Road, London, S.W.

## THE CITY AND GUILDS OF LONDON INSTITUTE.

This Institute is divided into four branches:—

- (1). The City and Guilds Central Technical College, Exhibition Road, S.W., which is a part of the Imperial College of Science and Technology;
- (2). The City and Guilds Technical College, Finsbury;
- (3). The City and Guilds South London Art School, Kennington Park Road, S.W.; and
- (4). The Department of Technology at the Central Technical College.

(1). Particulars regarding the City and Guilds Central Technical College are given under the Imperial College of Science and Technology.

(2). The City and Guilds Technical College, Finsbury, embraces the following Departments:—

1. Mechanical Engineering and Applied Mathematics.
2. Electrical Engineering and Applied Physics.
3. Industrial and Technical Chemistry.
4. Applied Arts.

In this Institution there are Day Classes for those who are able to devote one, two, or three years to systematic technical education, and Evening Classes for those who are engaged in industrial or commercial occupations in the daytime, and

who desire to receive supplementary instruction in the application of science and of art to the trades and manufactures in which they are concerned or employed.

The Fee for Day Students for a complete Course of Instruction is £20 for the Session, payable in advance at the beginning of the Session in October ; or £21 for the Session if paid in three instalments. These Fees include attendance at all the Lectures, Laboratory and Workshop Courses in the Department which the Student enters, as well as the use of apparatus and materials.

Day Students before being admitted will be required to pass an Examination in English—viz., Dictation, Analysis, and making an abstract of a spoken passage and a précis of a printed passage—and Mathematics—viz., Arithmetic, Algebra, Quadratic Equations, and Geometry, including the first four Books of Euclid, or the subjects thereof.

Students at the end of their first year's course are not admitted to the advanced course unless they show, not only by their answers in examination, but by the quality of their weekly work as evidenced by lecture note-books, laboratory note-books, drawings, &c., that they are able to take advantage of the training. Failing this their places are liable to be filled up by new Students. The reports furnished at the end of each of the three terms of the year indicate the progress of the Student.

No conditions about residence are prescribed by the College. A list of boarding-houses recommended to Students can be had on application to the Registrar of the College.

(3). The Technical Art School embraces Departments of Modelling, Drawing and Painting, and House Decoration.

(4). The Department of Technology holds annual examinations in Technology, Domestic Economy, and Manual Training.

## CRYSTAL PALACE COMPANY'S SCHOOL OF PRACTICAL ENGINEERING.

This School was established (1872) for the purpose of providing Students of Mechanical or Civil Engineering with thorough practical instruction in the rudiments of the profession, and in the manipulation of materials. The leading object is to prepare Students, by a system of combined practical and theoretical instruction, for the profession, so that on entering an Engineer's office or works the pupil may at once be useful to his Principal, and enabled to take ad-

vantage of the opportunities open to him, having mastered the elementary details of the profession.

The School is also available for Students already articulated, who desire instruction in either the offices or shops; for gentlemen who wish to become Draughtsmen to Engineers or Patent Agents; or to study Electro-Mechanics; or to fit themselves by practical knowledge of scientific and mechanical work and expedients, for life in the colonies or abroad.

Candidates for admission to this School of Practical Engineering are required to pass a preliminary examination in the rudiments of Arithmetic, Algebra, Mensuration, Mechanical Powers, and Resolution of Forces.

The usual age for Students to be examined for entrance into the School is sixteen or seventeen years; but there is no limit as to age.

**MECHANICAL COURSE.**—The Mechanical Course is comprised in one year, and is designed to convey instruction essential either to the Student who intends to be a Mechanical Engineer, or to follow the Civil Engineering or any other branch of the profession. The year is divided into three terms of fifteen weeks each.

One term of this Course is devoted to the study of Mechanical Drawing, another to Pattern Making and Foundry Work; and a third to Fitting and Smith's Work. While employed in the Drawing Office, Students are engaged in making drawings of machinery and constructions, in tracing, in getting out quantities and estimates, in calculating the strength of materials, &c. In the Pattern Shop and Foundry they prepare patterns of engines and machinery and practice Moulding and Foundry work; in the Fitting Shop and Smiths, in fitting and erecting engines of from 3 to 6-horse power, or other suitable work for the market, and in forging and tool-making.

Lectures on engineering subjects are delivered to the Students twice a week.

**CIVIL ENGINEERING COURSE.**—The instruction is intended to be supplementary to the Mechanical Course of the School, and like it, a preparation for the profession; but it can be attended separately, or the Students can attend one or more of the Terms into which the tuition is divided.

The Course is one year, and the tuition is divided into three Terms, each of fifteen weeks.

The first Term is devoted to Projecting and Practical Preparation by actual Levelling, etc., of plans in detail for a

complete Public Work (as a Railway and Dock) and the preparation of Plans and Estimates for Parliament.

The second Term is devoted to the preparation of Working Plans and Sections, Calculations, Estimates, etc.

The third is utilised for original Designing, and for the investigation of existing Engineering Works, completed or in progress, and the general application of principles in practice.

**ELECTRICAL ENGINEERING.**—The ordinary curriculum for the Electrical Section is of two Terms' duration, during which the Students' time is devoted to Special Lectures; instruction, both Theoretical and Practical, in the shops and offices of the School, and directed practical work. The instruction is intended to be supplementary to the ordinary curriculum of the School.

The Fee for the Mechanical Course, 1 year, is £54, for the Civil Course £64 10s., or for both Courses, 2 years, paid for in advance, £108. The Fee for the Special Electrical Course is £21 10s. per Term.

### THE INSTITUTION OF CIVIL ENGINEERS.

This Institution does not issue certificates of passage of its Examinations, which are held solely for the purpose of proving eligibility for admission as a Student of the Institution, or for election into the Corporation, in so far as such attainments are comprised in the requirements.

The Institution holds (1) Studentship and (2) Associate-Membership Examinations in February and October of each year. For the former the Council will consider any application from a person who is duly recommended for Admission as a Student of the Institution. Applications to attend the whole or any part of the latter will be received only from (a) Students of the Institution who are not less than 21 years nor more than 26 years of age on the last day for entry; or (b) persons who have lodged duly completed proposals for their election into the Institution and have been formally notified by the Council that they must pass the examination as a condition of election. Applications to be examined must be on the prescribed form, and must be in the hands of the Secretary not later than 31st December for the February examination, and not later than 31st August for the October examination.

The Examination Fees for the Studentship Examination are, on a first entry, £1 11s. 6d., and for any subsequent entry £1s. 1s., and for the Associate Membership Examination 2 12s. 6d. and £2 2s. respectively.



Arrangements may, at the discretion of the Council, be made for the examination of persons in India and the Colonies. The papers of the October examination only will be placed before such candidates, and their applications and fees must be in the Secretary's hands not later than the 31st May preceding.

The Studentship Examination includes the following subjects: (1) English, (2) Mathematics, (3) two subjects selected from the following ten: a language is not compulsory, but in any case not more than one language may be taken:—

(i.) Latin, (ii.) Greek, (iii.) French, (iv.) German, (v.) Italian, (vi.) Spanish, (vii.) Elementary Mechanics of solids and fluids, (viii.) Elementary Physics, including heat, light, electricity and magnetism, (ix.) Elementary Chemistry, (x.) Geometrical and Freehand Drawing.

Graduates of any University in the British Empire, Whitworth Scholars, and Whitworth Exhibitioners are exempted from this examination; and various examinations held by certain British and Colonial Universities are recognised by the Council as qualifying in lieu of it. It is a condition of the acceptance of these Certificates as exempting qualifications that they shall have been obtained by passing the respective Examinations at one sitting.

The Associate Membership Examination is divided into two parts: Part I., General Knowledge, and Part II., Scientific. In the former candidates are required to prove their knowledge of the English language, and their attainments in general knowledge by writing an essay of about 1,000 words. Students of the Institution, and persons producing qualifications equivalent to those required for the Studentship examination, are not required to pass this. The latter is divided into Sections A and B. Section A includes (1) Mechanics, (2) Strength and Elasticity of Materials, (3) *Either* (a) Theory of Structures, *or* (b) Theory of Electricity and Magnetism.

Section B. In this two of the following nine subjects (not more than one from any group) may be taken:—

GROUP I.	GROUP II.	GROUP III.
Geodesy.	Hydraulics.	Geology and Mineralogy.
Theory of Heat-Engines.	Theory of Machines.	Stability and Resistance of Ships.
Thermo- and Electro Chemistry.	Metallurgy.	Application of Electricity.

In the discretion of the Council arrangements may be made for the examination in October of persons residing in

India, or in the Colonies, in whose favour proposals for election have been lodged.

As the rules are frequently revised, application should be made directly to the Institution.

An essential condition of election into the Institution is a regular course of engineering training *under practical conditions*, and the Council attach so much importance to this condition that they require all persons who contemplate attending the Institution Examinations to show that they either have, or intend to obtain, such regular practical training under practising engineers.

For further information see the "Rules and Syllabus of Examinations applying to admission of Students and to Election of Associate Members," a copy of which may be procured from the Secretary, the Institution of Civil Engineers, Great George Street, Westminster, S.W.

### FARADAY HOUSE.

#### THE ELECTRICAL STANDARDIZING, TESTING AND TRAINING INSTITUTION, LONDON.

(ESTABLISHED 1889.)

The Training Department of the Institution provides students with a thorough training, theoretical and practical, in Electrical Engineering. The full course occupies four years, the first and third at Faraday House, the others at Engine Manufacturers and Electrical Manufacturers or Power House. The first and third years' courses are divided into the Lent term (Jan.-April), the Summer term (April-July), Michaelmas term (Sept.-Dec.).

The first year's course includes theoretical and practical instruction in Electricity and Magnetism, Electrical Engineering, Mathematics, Physics, Mechanical Drawing, Mechanical Engineering, Chemistry, Laboratory and Workshop practice.

One of the special advantages is that a large number of engineering firms of high standing are associated with the Institution, and provide the practical commercial workshop experience, without which no engineer's training is complete.

It is necessary to pass the Entrance Examination before joining, students who have passed the Matriculation Examination of an Indian University will be exempted.

Examination for Entrance Scholarships are held three times a year—January, Easter and July. The value of the Scholarships is "Faraday," fifty guineas per annum; "Maxwell," thirty-five pounds per annum, tenable for three years.

The fees are : 1st year, £35 a term ; 2nd year, £78 5s. the year ; 3rd year, £26 5s. a term ; 4th year, £52 10s. the year. The fees are inclusive, *i.e.*, there are no extra tuition fees, nor are there any payments to be made by the parents to the firms to whom a student is sent during the 2nd and 4th years.

## FACULTY OF ENGINEERING, KING'S COLLEGE, LONDON.

This Faculty provides a systematic course of study of University character for those intending to devote themselves to Engineering, Chemical Manufacture, or Metallurgy. It is so arranged as to give preparation for those wishing to take the B.Sc. in Engineering at the University of London.

The scientific principles which underlie all branches of Engineering, together with the methods of applying those principles, are taught in the following courses :—

(1) A Four Years' Course for Mechanical and Electrical Engineers, the Winter Sessions being passed in the College and three Summer Sessions in "Works."

(2) A Three Years' continuous College Course for Mechanical and Electrical Engineers.

(3) A Four Years' Course for Civil Engineers, a portion of the time being passed in "Works."

(4) A Three Years' continuous College Course for Civil Engineers.

(5) A Three Years' continuous College Course for Mining Engineers and Metallurgists.

Candidates for the Indian Public Works Department are required, in addition to their three years' College theoretical training, as certified by a University Degree, or some equivalent Diploma, to have had some experience in Engineering works of importance. In order to enable Candidates to satisfy these conditions, the College authorities will assist them in obtaining experience in "Works" during the long vacations.

The Fees payable by Matriculated Students, and those following the full prescribed course, are :

Entrance fee, £5 5s., and tuition fees, 50 guineas per annum, if paid in one sum at the commencement of each year, or 52 guineas per annum if paid in two instalments yearly.

For further information apply to the Secretary, Faculty of Engineering, King's College, 160, Strand, W.C.

## THE NORTHAMPTON POLYTECHNIC INSTITUTE, LONDON.

The aim of the Institute is to provide courses in technological and trade subjects; its object is not to prepare the student to pass Examination tests, but to fit him to become a competent worker and thinker in the career which he has chosen.

The day courses in Engineering and other subjects are for Students who are willing to give the whole of their time, for one, two or more years, to thorough systematic training; the evening classes are for those who are unable to attend during the day.

The Engineering Day courses are divided into three sections (1) Mechanical Engineering, (2) Electrical Engineering, and (3) Watchmaking and Horological Engineering.

The work consists of lectures, exercise classes, laboratory work, drawing office and workshop practice. The laboratories, drawing offices and workshops are fully equipped with the most recent apparatus and tools.

The aim in the Mechanical Engineering section is to give a good all-round training in the fundamental principles of modern mechanical engineering practice. Special attention is devoted to the design and application of automatic machinery for that rapid and economical production of finished work which is every day becoming more and more important. Lectures are given dealing with the commercial side of Engineering.

In the Electrical Engineering section, besides the training in Electric Lighting and Power Distribution special courses are given in Electric Traction and in Telegraphy and Telephony, including Radio-Telegraphy.

In Horology considerable time is given to workshop practice. Students are taught the methods of finishing, escapement making, &c., by aid of hand tools, besides receiving instruction in the details of automatic tools.

There are also day courses in Electro-Chemistry, in Technical Optics and in Artistic Crafts in all of which the methods and aims are similar, *mutatis mutandis* to those adopted in the Engineering day courses. In Electro-Chemistry the latest developments in a rapidly extending branch of applied science are included. The technical optics section is unique and covers a wide range extending from scientific sight testing to the construction of the most refined optical instruments. In Artistic Crafts there are courses in Art Metal work of all kinds from the most delicate jewellery to heavy

decorative iron work ; there are also classes in artistic book-binding, and other subjects.

Students joining the Institute should not be less than fifteen years of age, and are required to pass an Entrance Examination in English and Elementary Mathematics.

The hours of attendance are from 10 a.m. to 5 p.m., with an interval from 1 to 2 p.m., except on Saturdays, when the hours are from 10 a.m. to 1 p.m.

The fees for the first and fourth year in Mechanical or Electrical Engineering is £15 a year—for the second and third years £11 a year ; for a year's course in Watchmaking, £5.

These fees are payable in advance. The fees in other departments of the Day Courses are similar to the Engineering fees.

Evening classes are also held in Engineering and in several trade subjects. These are suitable for Jewellers, Gold and Silversmiths, Diamond Mounters, Engravers, Chasers, Decorative Metal Workers, Modellers, and Workers in Plaster, Bookbinders, Wood, Stone and Marble Carvers, Cabinet-makers, &c. The fees for Evening Classes are very moderate, and vary slightly for the different subjects.

For further particulars apply to the Principal, St. John Street, London, E.C.

### THE BATTERSEA POLYTECHNIC

affords a thoroughly scientific and technical training to Students desiring to enter the Mechanical, Electrical or Civil Engineering, or Architectural professions.

The Instruction consists of Lectures, Laboratory, Field work, and Drawing Office practice and Workshop training, and is thoroughly practical, being given by specialists in the various branches of work, and the Polytechnic is provided with well-equipped Laboratories, Drawing Offices, and Workshops. The full course of instruction extends over three or four years, and diplomas are granted to those taking the full course, and attaining the requisite standard of knowledge. Before being admitted to the Polytechnic, candidates are required to pass an examination.

**COMPULSORY.**—Mathematics, English, French or German.

**OPTIONAL.**—At least one of the following: Higher Mathematics, Mechanics, Physics, Magnetism and Electricity, Inorganic Chemistry, P.P. and S. Geometry, Botany and Hygiene. Practically the age of admission is not less than 16 years.

Courses in Chemistry are also offered to those intending to devote themselves to Industrial Chemistry, or preparing to occupy positions in Chemical works. These courses are also suitable for students preparing for the examinations of the General Medical Council, the Conjoint Board of the College of Physicians and Surgeons, and other professional bodies.

All the above courses of study also prepare for the degrees of the University of London in Science or Engineering. The courses are approved by the University, and are conducted by recognised teachers of the University.

The fee for full daily attendance is £12 12s. per session, or £4 7s. 6d. per term. The session extends from September to July.

The Polytechnic also provides instruction in Art and Craft work, having for its object the thorough training of the practical designer and craftsman, in the various branches of applied art. Elementary and advanced instruction is given in Art Subjects, special attention being given to design, and practical instruction in Modelling in Wood, Stone, Marble, Glass and China Painting, Enamelling, and Art Needlework.

The fee for four days per week for Art Instruction ranges from 32s. to 40s. per term, according to subjects taken.

Courses are also arranged for those intending to enter Commercial Life or to prepare for Civil Service Examinations. These courses also extend over three years, and the fee per session September to July is £12 12s., or £4 7s. 6d. per term.

For women the Polytechnic provide a Training School for Students wishing to qualify for appointments as Teachers of Cookery, Laundrywork, Housewifery, Needlework, Dress-making and Millinery. The full course of all subjects extends over three years and courses in single subjects from 17 to 40 weeks. The fee for the full course of three years is £70, and courses in single subjects from £10 to £32. The Department possesses elaborate equipment in the way of Science Laboratories, together with rooms specially built and equipped for Cookery, Laundrywork, Dressmaking, Needlework, Millinery, &c. The Diplomas are recognised by the Board of Education for full teaching purposes.

The Physical Department for Women gives full courses of Instruction in the various forms of Physical Education, and this Department possesses a large Gymnasium and full gymnastic equipment.

Hostels are provided for Women Students. These are carried on under the direct knowledge of the Governors of the Polytechnic.

## THE MUNICIPAL SCHOOL OF TECHNOLOGY, MANCHESTER.

The object of the Municipal School of Technology is to provide instruction and training in the principles of Science in their application to the Industrial Arts, with a view to a right understanding of the foundations upon which these arts rest, and to promote their effective development.

The School is designed to accommodate the Mechanical, Electrical and Sanitary Engineering, the Chemical, Textile, Building, Letterpress Printing, Lithographic, Photo-process, and some other minor trade industries; whilst adjoining the main building is the Dye-house, where ample provision is made for the study of Bleaching, Dyeing, Printing and Finishing of Textile Goods, and for Paper-making.

The successful career of a student depends very largely upon his previous general education, for unless this has been thorough and liberal, no satisfactory progress can be attained in any of the departments of the School.

The School offers to Students who have reached their 16th year the following courses, each of three years' duration:—

1. Mechanical Engineering.
2. Electrical Engineering and Technical Physics.
3. Municipal Sanitary Engineering.
4. Applied Chemistry; (A) General Chemical Technology; (B) Chemistry of Textiles (Bleaching, Dyeing, Printing and Finishing); (C) Manufacture of Paper; (D) Metallurgy and Assaying; (E) Brewing; (F) Electro-Chemistry.
5. Manufacture of Textiles.
6. Photography and the Printing Crafts.
7. Architecture and the Building Trades.

Students are required to pass an Entrance Examination in subjects of general knowledge, or to produce evidence, satisfactory to the Principal, of their attainments. Indian Students are not required to take this Examination if they have passed the Matriculation Examination of an Indian University.

The Entrance Examination is held twice each year, namely, in July and in September.

A Certificate in Technical Science can be obtained after a three years' course, but a special course of two years can be taken in the Textile Department. In this case satisfactory previous knowledge is necessary, and Students who have passed examinations in an Indian Technical School, or have had experience in a mill, can take advantage of this special course.

The Fees for each Department are 20 guineas for each complete session, payable in advance.

Students who intend to proceed to the Degree in the Faculty of Technology, of Master or Bachelor of Technical Science (M.Sc. Tech. or B.Sc. Tech.), must pass the Examination for Matriculation of the University of Manchester, which dispenses with the Entrance Examination of the School, or must present its equivalent.

Further particulars of these Courses of Study will be found in the Calendar published by the Municipal School of Technology, which can be obtained by application to the Principal.

### COURSE WITH AN ENGINEER.

Engineering Students, in order to attain a knowledge of practical details of construction, &c., should serve as pupils on the works or in the office of a Civil or Mechanical Engineer. The Course is usually for three years, but a shorter time may suffice if the Student has gone through any of the above Courses of Study. The Fee with an Engineer is usually from £300 to £600 for a Course of three years.

### LEATHERSELLERS' COMPANY'S TECHNICAL COLLEGE, LONDON.

This College is equipped with every appliance requisite for the practical Manufacture, Currying, Dyeing, and Finishing of all kinds of leather. The instruction given covers the whole field of Manipulative Procedure, which, starting from the raw animal hide, finds its completion in the multifarious Leathers that constitute the raw material for the numerous leather-working industries.

The classes are divided into Day Division and Evening Division Classes. In the former there are courses of lectures in Tanning, Currying and Leather Dressing; in applied Chemistry and Leather Manufacture; and in the principles and practice of the dyeing and finishing of light leathers, and the staining and finishing of heavy leathers.

The Session is made up of the winter, spring and summer terms, and the courses of study in the Institute are arranged to suit the varying requirements of the day students.

Students may enter for the full session of three terms, or for one or two terms only. The fees for the full time course Tanning, Currying and Leather dressing, and for the full-time course in Leather Dyeing, Staining and Finishing are £12 12s. per term, and £31 10s. per session. Term fees for one day, or



other period per week, whether for Term or Session, may be had on application. The fee for the course of 25 lectures in applied chemistry is £3 3s. od.

In the Evening Division the Session is from September to April, and Students are advised to go through courses of study of two or three years' duration, such courses not requiring attendance on more than two nights a week; and the fees for such attendance, either in the Leather, Tanning, and Leather Dressing Department, or in the Leather, Dyeing, Staining, and Finishing Department, not exceeding 15s. a term.

### ARCHITECTURE.

The Royal Institute of British Architects has laid down a regular course for pupils, with examinations to be passed for membership. A good general education is required as a preliminary before entering upon the course.

The Architectural Association affords facilities for the study of Architecture. The Day School provides for two years of study, and the pupils are then expected to enter Architects' offices as articled pupils for a short period and attend the Evening School, which provides for more advanced and continuous study. A four years' continuous evening course is also available. Students in the Evening School may, if desired, prepare for the Intermediate or Final Examination of the Royal Institute of British Architects, and qualify for candidates as Associates.

Students having passed through two years in the Day School and two years in the Evening School, will be entitled to complete exemption from the R.I.B.A. Intermediate Examination, if their work is approved by the Masters and the Board of Examiners.

There are many colleges in Great Britain that have a special two to three years' course for architecture, or the student would do well to take a B.Sc. degree at one of the Universities, and then become a pupil for three years under some well-known and actively employed architect, for which the usual premium is from fifty to one hundred guineas a year.

### ART SCHOOLS.

There are many Art Schools in England at which instruction and practice can be obtained in Drawing, Painting, Architecture, &c. Such Classes may be joined at the South Kensington Museum and its affiliated Schools of Art, at University College, and King's College, London, or in connec-

tion with private studios. Several of the other institutions above described give facilities for the study of Art.

### LECTURES ON SEPARATE SUBJECTS.

Students who have time at their disposal beyond that necessary for their special course of study, as is often the case with those reading for the Bar, may be glad to attend lectures and classes on other subjects. These can be obtained at several of the London Colleges, *e.g.*, University College, King's College, and School of Economics, such as History, Literature, Political Economy, Languages, Philosophy, &c.

Attention is specially drawn to the course of Lectures for Indian Students at the London School of Economics, on p. 40.

**BIRKBECK COLLEGE.**—Is conducted in close relationship with the University of London. Courses of study, day and evening, for the University Examinations are provided under recognised Teachers of the University in the subjects of the Faculties of Arts, Science, Laws and Economics. Prospectus can be obtained from the Secretary, Breams Buildings, Chancery Lane, W.C.

**PITMAN'S METROPOLITAN SCHOOL FOR SHORTHAND, TYPE-WRITING, AND COMMERCIAL SUBJECTS,** has a large permanent staff of experienced teachers. It gives instruction and practice in Shorthand, Verbatim Reporting, Modern Languages, Typewriting, Business Routine, Book-keeping, &c. Fees, £5 5s. for a complete course of Shorthand, until the pupil has obtained Pitman's Certificate. Typewriting, £3 9s. 8d. for 150 lessons, including Stationery. All pupils are taught by specialists.



# UNIVERSITY TUTORIAL COLLEGE.

*(Affiliated to University Correspondence College.)*

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Day and Evening Classes

FOR

## London Matriculation

OXFORD RESPONSIONS,  
CAMBRIDGE PREVIOUS,  
LEGAL PRELIM.,  
COLLEGE OF PRECEPTORS

*(Medical Prelim.),*

*And other Examinations,*

ARE HELD AT

University Tutorial College,  
**LONDON.**

Annually for the last ten years about 300 Students of University Tutorial College have passed London University Examinations, and many successes have been gained at other examinations.

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## Private Tuition

may be taken up at any time of the year, either during term or the ordinary School vacations. Chemical, Physical, Geological and Biological Laboratories. The Principal attends daily from 2.0 to 5.0 to advise students respecting their work. An appointment can be made for other times. Prospectus may be had from—

THE PRINCIPAL,  
University Tutorial College,  
Red Lion Square, Holborn,  
LONDON.

# University College of Wales,

## ABERYSTWYTH

(One of the Constituent Colleges of the  
University of Wales).

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President :

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Students are prepared for Degrees in Arts, Science, including the applied Science of Agriculture, Law, and Music. Sessional Composition Fee, £10, with additional Laboratory Fees for Science Students. Registration Fee, £1.

The Men Students reside in registered lodgings in the town, or at the Men's Hostel, under the charge of a Warden, Professor J. W. Marshall, M.A.

Women Students reside at one of the Hostels under the charge of Miss E. A. Fewings.

The Fees at the Hostels vary from 10 to 17 Guineas per term.

### **Agricultural Department.**

The Degree Course qualifying for the B.Sc., Degree of the University of Wales, extends over three years, and the Course is Open to all Students who have matriculated in the University. The Diploma Course qualifying for the College Diploma in Agriculture, also extends over three years, but the Students attend Classes only during the winter months, and the remainder of their time must be devoted to practical work on a farm.

### **Law Department.**

The Lectures in this Department are primarily intended for Candidates for the Degree of B.A., and LL.B., of the University of Wales.

Persons who obtain one or other of these Degrees are exempted from two years of the period of Articles for the Profession of a Solicitor.

The Lectures will also be found serviceable for Candidates for the Bar Examinations and for the higher examination of the Home and India Civil Service.

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For further particulars relative to the College, apply to

**THE REGISTRAR.**

# Northampton Polytechnic Institute,

ST. JOHN STREET, LONDON, E.C.

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## ENGINEERING DEPARTMENTS.

Full Day Courses in the theory and practice of **Mechanical and Electrical Engineering** are held each winter session, extending from October to July. For this work the Institute is very liberally equipped, in laboratories and workshops, with apparatus and machinery of the latest types, and in the various courses the most recent developments are dealt with. An entrance examination is held at the end of September in each year, at which three Entrance Scholarships, each of the value of £52, in Mechanical and Electrical Engineering are usually offered for competition. Matriculated students of the London University are prepared for the Degree of B.Sc. in Engineering as "Internal Students." Fees £15, or £11 per annum.

## ELECTRO-CHEMISTRY.

In close connection with the Day Courses in Electrical Engineering there are Day Courses in Electro-Chemistry, for which also the Institute is liberally equipped. The entrance conditions, periods of study, and fees are the same as for the Engineering Day Courses.

## TECHNICAL OPTICS.

There is a Technical Optics Department, unique of its kind, in which full and part-time Day Courses in all branches of this important section of Applied Science are given in specially equipped laboratories, workshops and lecture rooms. These courses are specially adapted to meet the varied requirements of opticians, optical instrument makers, and other members of the optical trades. Fees, entrance conditions and times of attendance as for the Engineering Day Courses.

## ARTISTIC CRAFTS.

Day Courses are held in all branches of Goldsmiths, Silversmiths, Jewellers, and other sections of Art Metal work, including chasing, engraving, enamelling, etc. Also in Artistic Bookbinding and Artistic Cabinet work.

## HOROLOGICAL ENGINEERING AND WATCHMAKING.

Full Day Courses are also held in this group of subjects, instruction being given in special workshops and in the lecture room and laboratories of the Institute. The entrance examination is held at the same time as that for the Engineering Day Courses, and there are two Scholarships, of the value of £31 ros. each, which are offered for competition from time to time. Fees £8 per session for the same periods as set forth above.

Full particulars of all the above Courses and all other work of the Institute can be obtained on application at the office of the Institute, or to

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