

Fees.—The inclusive fee is fifty guineas; if a candidate fail to pass twenty guineas are retained, but if he present himself again forty guineas only are required.

Dates, etc.—The examinations are held twice a year, at the end of April and of September. Notice, accompanied by the fee and certificates, must be sent to Professor Howden, Secretary of the University of Durham College of Medicine, Newcastle-on-Tyne, at least twenty-eight days before the commencement of the examination.

UNIVERSITY OF ST. ANDREWS.

The degree of M.D. may be conferred on any registered medical practitioner above the age of 40, of approved professional position and experience, and who shall pass a satisfactory examination in (1) *Materia Medica* and General Therapeutics, (2) Medical Jurisprudence, (3) Practice of Medicine and Pathology, (4) Surgery, (5) Midwifery and Diseases of Women and Children. Certificate of age, and certificates from three medical men of acknowledged reputation as to the professional position and experience of the candidate, must be sent in.

Fees.—The fee is 50 guineas, inclusive of stamp duty, and a Registration Fee of £1. Only 10 such degrees are conferred in any one year.

UNIVERSITY OF BRUSSELS.

British practitioners of medicine holding medical and surgical qualifications are, in common with legally qualified practitioners in other countries, admissible without further curriculum to the examination for the degree of M.D. of the University of Brussels.

Examination.—The examination is divided into three parts. The "First Doctorate" includes Medicine, Pathology (with microscopical examination), Therapeutics, Mental Diseases, and Diseases of Women and Children. The "Second Doctorate" comprises Surgery, Ophthalmology, Midwifery, Hygiene, and Medical Jurisprudence. The "Third Doctorate" consists of clinical examination in Medicine and Surgery, examination in Midwifery with the mannequin, Operative Surgery (amputation, ligature of arteries in the dead subject), and Regional Anatomy with Dissections. Special importance is attached to practical knowledge. The examination is conducted in French through an official interpreter, but most of the examiners, it is stated, speak English fluently. The examination is *viva voce*, but a written examination may be obtained on paying a special fee of £1 for each part.

Dates.—The examinations take place on the first Tuesday in November, December, February, May, and June. It is desirable that the candidate should arrive in Brussels on the previous Saturday before 2 P.M. at latest. The whole examination (First, Second, and Third Doctorate) may be got through in about a week.

Fees.—Candidates are required to leave their diplomas with the Registrar of the University prior to the examination. The fees are: for inscription of name, £8 12s.; for examination, £13; for legalisation of diploma, 8s.; total, £22. If a candidate fail in the first part of the examination the fees for the second and third are returned to him; if in the second, the fees for the third. A rejected candidate may present himself again in three months on paying one-half of the examination fees.

Further particulars may be obtained from Dr. Major Greenwood, Hon. Sec. Brussels Medical Graduates' Association, 243, Hackney Road, London, N.E. An article containing a full description of everything concerning the degree was published in the BRITISH MEDICAL JOURNAL on September 15th, 1888.

N.B.—This degree, if obtained subsequent to June, 1886, it not registrable.

ADMISSION OF WOMEN TO THE UNIVERSITY OF BUDA-PESTH.—The University of Buda-Pesth, in reply to a question addressed to it by the Hungarian Minister of Public Instruction, has expressed the opinion that women should be allowed to enter as students of the medical and pharmaceutical faculties, and should be admitted to degrees in medicine and pharmacy on the same terms as men.

PUBLIC HEALTH OR STATE MEDICINE.

A MEDICAL officer of health of any county or county district, or of any metropolitan district, or the deputy of any such officer, must be legally qualified for the practice of Medicine, Surgery, and Midwifery, and also either be registered in the *Medical Register* as the holder of a diploma in Sanitary Science, Public Health, or State Medicine under Section 21 of the Medical Act, 1886, or have been, during three consecutive years preceding the year 1892, a medical officer of a district or combination of districts in London or elsewhere with a population, according to the last published census, of not less than 20,000, or have, before the passing of the Local Government Act, 1888, been for not less than three years a medical officer or inspector of the Local Government Board.

Certain regulations for candidates for diplomas in Public Health have been laid down by the General Medical Council, and are binding on any candidate who may have been registered or become entitled to be registered as a medical practitioner after January 1st, 1890. These regulations are designed to ensure "the possession of a distinctly high proficiency, scientific and practical, in all the branches of study which concern the Public Health." The Executive Committee of the General Medical Council has power in special cases to admit exceptions to the rules. The regulations are as follows: "(b) A period of not less than twelve months shall elapse between the attainment of a first registrable qualification in Medicine, Surgery, and Midwifery and the examination for a diploma in Sanitary Science, Public Health, or State Medicine. (c) Every candidate shall have produced evidence of having attended, after obtaining a registrable qualification, during a period of six months practical instruction in a laboratory approved of by the body granting the qualification. (d) Every candidate shall have produced evidence that, during a period of six months after obtaining a registrable qualification, he either has practically studied the duties of outdoor sanitary work under the medical officer of health of a county or large urban district, or else has himself held appointment as medical officer of health under conditions not requiring the possession of a special sanitary diploma. (e) The examination shall be conducted by examiners specially qualified, and shall comprise laboratory work as well as written and oral examination." Further regulations have been laid down, and are binding on any candidate who may have been registered after January 1st, 1894, and require such candidate to produce evidence (1) of having after obtaining a registrable qualification attended during a period of six months practical instruction in a laboratory approved by the bodies granting the qualification, including the pathology of those diseases of animals that are transmissible to man; (2) of having before or after obtaining a registrable qualification attended the clinical practice of a hospital for infectious diseases approved by the several licensing bodies recognised under the Medical Acts. The rules (1) (2) do not apply to medical practitioners registered or entitled to be registered on or before January 1st, 1894.

The rules (b) (c) (d) as to study do not apply to "(1) Medical practitioners registered, or entitled to be registered, on or before January 1st, 1890; (2) registered medical practitioners who have for a period of three years held the possession of medical officer of health to any county, or to any urban district of more than 20,000 inhabitants, or to any entire rural sanitary district."

The examinations for diplomas in Public Health, granted by the various Universities and Medical Corporations, and the courses of study required are adapted to meet the regulations of the General Medical Council, and, as a rule, to fulfil the recommendations issued by that body from time to time. It would be unnecessary to recapitulate in every case details of this nature.

Books.

Inquiries are often made with regard to the most suitable books to be read by practitioners preparing for examinations

in Public Health. The following list issued until recently by the University of Cambridge will be found useful. It is not, of course, intended that these candidates should read all, or even the majority, of these works, but it will not be difficult to make a selection. The books marked (*) may be used for reference.

Parkes's *Manual of Practical Hygiene* (Churchill); Wynter Blyth's *Manual of Public Health* (Macmillan); Grimshaw and others, *Manual of Public Health for Ireland* (Fannin, Dublin; and Longmans); Cameron's *Manual of Hygiene* (Hodges, Foster, and Co., Dublin; and Baillière, Tindall, and Cox); Seaton's *Handbook on Vaccination* (Macmillan); McVail's *Vaccination Vindicated* (Cassell); *Reports of the Royal Commission on Vaccination; *Army Medical Reports, *Reports on Hygiene* (Eyre and Spottiswoode); *Reports to Privy Council and Local Government Board by their Medical Officer (Eyre and Spottiswoode); Simon's works (Churchill).

On Chemistry: General Principles.—Watt's *Manual of Chemistry* (Churchill); Bloxam's *Chemistry* (Churchill); Roscoe's *Lessons in Elementary Chemistry* (Macmillan); *Miller's *Chemistry* (Longmans); *Thorpe's *Dictionary of Applied Chemistry* (Longmans).

Analysis.—Sutton's *Systematic Handbook of Volumetric Analysis* (Churchill); Frankland's *Water Analysis for Sanitary Purposes* (Van Voorst); Wanklyn and Chapman's *Water Analysis* (Trübner); Hartley's *Air and its Relations to Life* (Longmans); Wanklyn's *Air Analysis* (Trübner); C. Fox, *Sanitary Examination of Water, Air, and Food* (Churchill); Wynter Blyth's *Foods, Composition, and Analysis* (Griffin).

Physics.—Everett's *Textbook of Physics* (Blackie); Ganot's *Physics* (Longmans); Deschanel's *Physics* (Blackie); *Daniell's *Textbook of the Principles of Physics* (Macmillan).

Microscopy.—Macdonald's *Guide to Microscopical Examination of Drinking Water* (Churchill); Davis's *Practical Microscopy* (Allen); *Cornil and Babe's *Les Bactéries* (Aican); Crookshank's *Manual of Bacteriology* (Lewis); Klein's *Micro-organisms and Disease* (Macmillan); Flügge's *Micro-organisms* (New Sydenham Society).

Sanitary Engineering, Water Supply, Sewage, etc.—Eassie's *Sanitary Arrangements for Dwellings* (Smith, Elder, and Co.); Galton's *Healthy Dwellings* (Clarendon Press); Corfield's *Dwelling Houses: their Sanitary Construction and Arrangements* (Lewis); *Bailey-Denton, *Sanitary Engineering* (Spon); *Latham's *Sanitary Engineering* (Spon); *Bayles's *House Drainage and Water Service* (Williams, New York); Tomlinson's *Warming and Ventilation* (Lockwood); Corfield's *Treatment and Utilisation of Sewage*, 3rd edition, 1887, by Corfield and L. Parkes (Macmillan); *Report of Committee appointed by President of Local Government Board on Modes of Treating Town Sewage (Eyre and Spottiswoode); *Reports of Royal Commission on Pollution of Rivers, especially the Sixth on Doncaster Water Supply (Eyre and Spottiswoode); *Reports (two) of Royal Commission on Metropolitan Sewage Discharge; *Report from Select Committee on Public Health Act (1875) Amendment Bill, with the Evidence (Eyre and Spottiswoode); *R. Angus Smith's *Air and Rain* (Longmans).

On the Laws of the Realm and By-laws relating to Public Health.—For England: Public Health Act, 1875, and the Acts of Parliament relating to the various subject-matters within the domain of Hygiene passed since that date; Housing of the Working Classes Act, 1890; Vaccination Acts. For the Metropolis, or for Scotland, or for Ireland; Laws dealing with the same subject-matters as the above, and having application to the particular part of the United Kingdom. Model By-laws of the Local Government Board (Eyre and Spottiswoode), or the same annotated (Knight); Adulteration of Food and Drugs Act.

Statistics.—Newsholme's *Vital Statistics* (Sonnenschein); Lewis's *Digest of the English Census* (Stanford); *The articles on "Statistics" in the *Cyclopædia of Anatomy and Physiology* (Longmans); *Papers by Mr Noel Humphreys in the *Journal of the Statistical Society*; *Dr. Farr's *Vital Statistics* (Stanford); *Dr. Farr's letters to the Registrar-General in the early Reports of the Registrar-General; *Reports of the Registrar-General (Eyre and Spottiswoode); *Deaths in England, Average Annual Proportion of Deaths, etc., 1861-70, Parliamentary Paper C. 874, Session 1873 (Eyre and Spottiswoode).

Construction of Hospitals.—Miss Nightingale's *Notes on Hospitals* (Longmans); Galton *On the Construction of Hospitals* (Macmillan); Burdett, *College Hospitals* (Churchill); **Hospital Construction and Organisation*—Johns Hopkins Essays (W. Wood and Co.); *Mouatt and Snell's *Hospital Construction and Management* (Churchill); **L'Etude et les Progrès de l'Hygiène en France*, article "Hôpitaux et Hospices" (Masson); *Dr. Thorne's *Report on Infectious Hospitals*—Local Government Board (Eyre and Spottiswoode); *De Chaumont, article "Hospitals" in the *Encyclopædia Britannica*, ninth edition.

The books recommended in the regulations for the Diploma in Public Health and the degree of B.Hy. in the University of Durham are:

Professor A. Wynter Blyth, *Manual of Public Health*; Dr. Louis C. Parkes, *Hygiene and Public Health*; Dr. George Wilson, *Handbook of Hygiene*.

Comparative Pathology.—Professor Crookshank, *Manual of Bacteriology*; or Dr. G. Sims Woodhead, *Bacteria and their Products*.

Sanitary Chemistry and Physics.—Dr. C. B. Fox, *Sanitary Examination of Water, Air, and Food*; Professor Wanklyn, *Analysis of Food and Water*; Mr. Noel Hartley, *Air, Water, and Disinfectants*.

Professor Corfield, *Dwelling Houses*; Professor Walley, *Meat Inspection*; Aitken's *Practice of Physics*—Medical Geography.

Law.—Knight and Co.'s *Public Health Acts* (latest edition); Infectious Diseases Prevention Act, 1890; Housing of the Working Classes Act, 1890; Public Health Acts (Amendment) Act, 1890; Knight's *Model By-laws*.

UNIVERSITY OF CAMBRIDGE.

A diploma in Public Health is granted by the University, and any person whose name is on the *Medical Register* may apply to be examined, provided that he can show that he has complied with the regulations laid down by the

General Medical Council (see Regulations (b), (c), (d), (1), (2), page 611). [These regulations do not apply to candidates registered or entitled to be registered on or before January 1st, 1890.]

The examination, which is usually held twice a year, on the first Tuesday in April and October respectively and three or four following days, is divided into two parts, both of which are partly oral and practical, and partly in writing. One day at least will be devoted to practical laboratory work, and one day to oral and practical examination in and reporting on subjects connected with outdoor sanitary work. They may both be passed together. A fee of £5 5s. must be paid before admission to either part.

PART I comprises Physics and Chemistry: the principles of Chemistry and methods of analysis, with especial reference to analyses of air, water, and food; applications of the microscope, including the investigation of micro-organisms; the laws of heat, and the principles of pneumatics, hydrostatics, and hydraulics, with special reference to ventilation, water supply, drainage, construction of dwellings, disposal of sewage and refuse, and sanitary engineering in general; meteorology in relation to health; sources of water supply; statistical methods in their application to public health.

PART II comprises laws and statutes relating to public health; origin, propagation, pathology, and prevention of epidemic and infectious diseases, including those diseases of animals that are transmissible to man; effects of overcrowding, vitiated air, impure water, and bad or insufficient food; unhealthy occupations and the diseases to which they give rise; water supply and drainage in reference to health; nuisances injurious to health; distribution of diseases within the United Kingdom, and effects of soil, season, and climate.¹ A list of Colleges and Schools of Medicine at which the courses of laboratory instruction have, for the purposes of this examination, been already approved by the syndicate, can be obtained on application. The foregoing schedule is not to be understood as limiting the scope of the examination, which will include every branch of sanitary science. No candidate will be approved by the examiners who does not show a high proficiency in all the branches of study, scientific and practical, which concern the public health.

Applications for further information should be addressed to Dr. Annington, Waltham-sal, Cambridge, who will also supply particulars as to the course of instruction provided in the University.

Application for admission to the examination must be made to J. W. Clark, M.A., Registrar, University Registry, Cambridge, not later than March 13th or September 17th, and must be accompanied by the proper fee and certificates. A candidate who has not been on the *Medical Register* for three years must show that he is in his 24th year at least when he presents himself for Part I, and at least 24 years old when he presents himself for Part II.

N.B.—It should be understood that the qualification is non-gremial, and confers no university position or privilege.

UNIVERSITY OF OXFORD.

A Diploma in Public Health is granted after an examination which will be held for the first time in Michaelmas Term, 1895. The examination will be conducted in two divisions: (1) First Division: The application of Chemistry and Physics to General Hygiene. (2) Second Division: (a) General Pathology, with special relation to Infectious Diseases; (b) Laws relating to Public Health; (c) Sanitary Engineering; (d) Vital Statistics. It will be permissible to take the two divisions at the same or at different examinations. Candidates must comply with the regulations of the General Medical Council (see p. 611). The First Division may be passed at any time after registration, provided that the candidate has spent six months studying in a public health laboratory approved by the Board of the Faculty of Medicine.

UNIVERSITY OF LONDON.

The University does not grant a Diploma in Public Health, but Sanitary Science is made a branch of the M.D. Examina-

¹ The examination papers set at former examinations can be obtained at the Cambridge University Press Warehouse, Ave Maria Lane, London, price 1s. each set, or by post 1s. 1d.

tion, which is open only to persons holding the degree of M.B.Lond. Candidates must in addition have complied with the regulations laid down by the General Medical Council (See Regulations (b), (c), (d), p. 611).

VICTORIA UNIVERSITY.

A Diploma in Sanitary Science is granted after an examination, which begins on the third Monday in July in each year. The candidate must fulfil the requirements laid down by the General Medical Council (see Regulations (b), (c), (d), page 611). The examination is divided into two parts: the subjects in each part, and their scope, as defined in the regulations of the University, so nearly coincide with those of the University of Cambridge that it is unnecessary to reproduce them. Special mention is, however, made of the use of meteorological instruments, of the diseases of animals in relation to the health of man, and of "Sanitary Reporting," every candidate being expected to visit and report upon the sanitary condition of some actual locality assigned to him by the examiners.

Each part of the examination occupies two days, and the fee for each part is £4 4s. Application for admission to the examination must be made to the Registrar of the University, Owens College, Manchester, not later than July 1st, and the fee must be paid on or before July 5th.

CONJOINT BOARD IN ENGLAND.

The diploma in Public Health of the Royal College of Physicians of London and the Royal College of Surgeons of England is granted to persons whose names are on the *Medical Register*, subject, so far as concerns those who have registered after January 1st, 1890, to the conditions laid down in the Regulations printed below. The examination is held in two parts, and Part I may be passed before fulfilling Clauses 1 and 2 under Part II. The subjects of the two parts of the examination are as follows:

PART I.—1. Physics, in their application to Health, with reference to—(a) Warming and Ventilation; (b) Water Supply, Sewerage, and Drainage; (c) Sanitary Construction. 2. Meteorology in relation to Health. 3. Chemistry with special reference to Food, Air, Soil, and Water. 4. Microscopical Examinations as applied to Air, Food, and Water. 5. Bacteriology, including the Cultivation and Recognition of Micro-organisms. 6. Geology and Soil in their relation to Drainage and Water Supply.

PART II.—1. The origin, development, and prevention of Disease with reference to: (a) Special Pathology of Epidemic and Endemic Diseases, including the Natural History of the Specific Organisms of Diseases; (b) Influence of Climate, Season, and Soil; (c) Effects of Unwholesome Air, Water, and Diet; (d) Diseases of Animals in relation to the Health of Man; (e) Influence of Occupation and Lodgment; (f) Isolation, Quarantine, Disinfection, Vaccination. 2. Sanitary Work and Administration with reference to: (a) Health Requirements of Houses, Villages, and Towns; (b) the Sanitary Regulations of Households, Establishments, and Occupations, including the Construction and Arrangement of Hospitals; (c) the Prevention and Control of Epidemic and Endemic Diseases. 3. Statistics in Relation to Health. 4. Statutes, Orders, and By-laws relating to Public Health. 5. Duties of Sanitary Authorities and their Officers. (The candidates may be required to visit and report on some premises selected by the examiners.)

A candidate will be admissible to examination in Part I on producing evidence: (1) Of having been in possession of a registrable qualification in Medicine, Surgery, and Midwifery for at least 12 months. (2) Of having attended, after obtaining such registrable qualification, practical instruction in a Laboratory recognised by the Examining Board in England during a period of six months.

I. Physics. Gases: examination of their physical properties; their weight and bulk under varying alterations of pressure and temperature, and the movements thereby set up; diffusion, with especial reference to warming and ventilation. Anemometers, and their use. Liquids: their physical properties, their pressure, and flow through tubes and conduits; their action on gases. Meteorological instruments, their construction and use. Barometers, thermometers, hygrometers, rain gauges. **II. Chemistry.** The analysis of water for drinki g purposes, including the qualitative and quantitative estimation of total solids (lime, magnesia, chlorides, sulphates, nitrates and nitrites, ammonia, and lead), and loss on ignition of solids; determinations of hardness, of organic impurities,

and of acidity and alkalinity. Chemical methods of treating sewage. The examination of air for the detection of polluting gases. Simple methods of eudiometry. Estimation of the quantity of carbon dioxide in air. **III. Microscopy.** The recognition of the constituents of food, such as starches and muscular fibre. The recognition of the chief fibres of clothing, such as wool, cotton, and silk. The recognition of constituents of ordinary dust and deposits from water. **IV. Bacteriology,** including the cultivation and recognition of micro-organisms. **V. Parasites** and other organisms infesting foods, stuffs, or the human body.

(3) Of being at least 23 years of age. A candidate will be admitted to Part II of the examination on producing evidence: (1) Of having, during a period of six months after obtaining a registrable qualification, either practically studied the duties of outdoor sanitary work under the medical officer of health of a county or large urban district, or else held appointment as Medical Officer of Health under conditions not requiring the possession of a special Sanitary diploma. (2) Of having attended the clinical practice of a hospital for infectious diseases recognised by the Examining Board in England, either before or after obtaining his registrable qualification in Medicine, Surgery, and Midwifery.¹ (3) Of being at least 24 years of age.

The two parts may be passed separately or at the same time. The fee for each is £5 5s., and must be paid three days before the examination commences. Fourteen days' notice must be given to the Secretary at the Examination Hall, Victoria Embankment, from whom further particulars and the dates of the examinations (which are held in the months of January and July) may be obtained.

UNIVERSITY OF DURHAM.

The University grants a Diploma in Public Health (D.P.H.) and the degrees of Bachelor in Hygiene (B.Hy.) and Doctor in Hygiene (D.Hy.).

Degree of Bachelor in Hygiene (B.Hy.).—1. The candidate for the degree of Bachelor in Hygiene (B.Hy.) must be a registered medical practitioner and a graduate in medicine of a recognised University, not less than 22 years of age, and must have passed his first registrable qualification in Medicine, Surgery, and Midwifery at least twelve months previously. He must have spent six months of professional study subsequent to the attainment of a first registrable qualification in Medicine, Surgery, and Midwifery, in attendance at Newcastle-upon-Tyne, in the following manner: *University of Durham College of Medicine.*—(a) Course of Lectures on Public Health. (b) Three Months' Course of Lectures of Comparative Pathology with practical work in a Bacteriological Laboratory. *Outdoor Sanitary Work.*—(c) Six Months' practical study of outdoor Sanitary Work under the Medical Officer of Health, Newcastle-upon-Tyne. *City Hospital for Infectious Diseases, Newcastle-upon-Tyne.*—(d) Three months' attendance on the Clinical Practice and Instruction. Regulation (a) to be omitted in the case of a candidate who has already attended the course before obtaining a registrable qualification. Regulation (c) to be omitted in the case of a practitioner who has himself held appointment as a medical officer of health under conditions not requiring the possession of a Sanitary Diploma under the Local Government (England and Wales) Act, 1888. *Durham College of Science.*—(e) Course of Lectures on Sanitary Chemistry and Physics. (f) Three months' practical instruction in a chemical laboratory. This course must not be concurrent with the three months' course of Lectures on Comparative Pathology with practical work in a bacteriological laboratory. The candidate shall be required to pass an examination in the following subjects: (a) Sanitary Chemistry.—The examination of Air; detection of noxious gases and atmospheric impurities. Water for sanitary purposes; detection of metals in water; the action of water on metals. Milk and Food. Detection of Poisons in Articles of Dress and Decoration. (b) Physics.—Hydrodynamics, Pneumatics, and Hydraulics, as applied to Hygiene. Light; Propagation of Light; Reflection and Refraction; Photometry. Heat; Thermometers; Laws of Heat in relation to Hygiene. Principles of Hygrometry and Hygrometers. (c) Sanitary Legislation.—Knowledge of the following Statutes and By-laws, namely: The Public Health Acts, Rivers Pollution Prevention Act, 1876; The Public Health (Water) Act, 1878; The Infectious Dis-

¹ This certificate is not required in the case of a candidate who produces evidence that he has commenced special study in Sanitary Science before January 1st, 1894.

eases (Notification) Act, 1889; The Local Government Act, 1889; The Infectious Diseases (Prevention) Act, 1890; The Housing of the Working Classes Act, 1890; The Public Health Acts (Amendment) Act, 1890; The Model By-laws of the Local Government Board relating to Cleansing, the Prevention of Nuisances, New Streets and Buildings, Slaughter-houses, Common Lodging Houses, Houses Let in Lodgings, Offensive Trades. Most of the above-mentioned statutes will be found in Knight and Co.'s *Public Health Acts* (latest edition), and the By-laws in the work under that title, by the same publishers. (d) Comparative Pathology, etc.—Knowledge of the Comparative Pathology, Methods of Propagation, and Prevention of Microbic and Parasitic Diseases inter-transmissible between Man and the lower Animals; Morphology of Microbes and Animal Parasites; Methods of Microscopical Examination and Artificial Cultivation of Micro-organisms. The Bacteriological Examination of Water, Air and Earth; the Special Characteristics, Life History, Properties, and Natural and Artificial Modes of Inoculation of Pathogenic Micro-organisms and Animal Parasites. (e) Vital Statistics: Rates of Birth, Death, and Marriage; Methods of Calculation, Classification, and Tabulation of Returns of Sickness and Mortality; Data required and Conclusions deducible therefrom. (f) Nosology: Definition, Nomenclature, and Classification of Diseases. (g) Meteorology, Climatology, and Geographical Distribution of Health and Disease over the Globe, and in different Urban and Rural Districts of the United Kingdom. (h) Sanitary Science in relation to the Origin, Propagation, Pathology, and Prevention of Epidemic, Endemic, Epizootic, and other Communicable Diseases; Diseases attributable to Heat, Cold, or Dampness, Insufficiency or Impurity of Air, Food, or Drink; Parasitic and other Diseases affecting the Food and Drink of Man; Diseases due to Habitation in Cities, Towns, Villages, and Separate Houses; Occupation and Trade Operations in relation to the Health of the Workers; Overwork, Intemperance, Heredity; Preventive Measures, Vaccination, Isolation, Disinfection; the Regulation of Noxious and Offensive Manufactures and Trades; the Removal of Nuisances. (i) Practical Hygiene in reference to Meteorological Apparatus, Sanitary Appliances, the Site, Materials, Construction, Capacity, Lighting, Ventilation, Warming, Dryness, Water Supply, Drainage, and Refuse Disposal of Houses, Schools, Hospitals, Artisans' Dwellings, Workshops and Workplaces, and other Buildings of Public or Private Resort; the Construction of Drains, Abattoirs, and Disinfecting Stations; Action with respect to Nuisances, and Outbreaks of Disease; the Examination of Butchers' Meat and other Food; the Preparation of Sanitary Reports, and other Duties of a Medical Officer of Health. The examination will be conducted by written papers, and practical and *visu voce* examination, and will be commenced on April 15th and September 16th, 1895. The candidate shall also be required: (1) To pass an examination on medical clinical cases at the City Hospital for Infectious Diseases, or elsewhere; (2) to draw up outlines for annual or other reports of a medical officer of health; (3) to report upon the condition of some actual locality; (4) to analyse liquids, gases, and specimens of food; (5) to describe the construction and use of instruments employed in Meteorology, Hygienic Apparatus, and Sanitary Appliances; (6) to examine with the Microscope submitted Specimens; (7) to describe submitted Specimens of Diseased Organs and Tissues (human and other); (8) to show a practical acquaintance with the usual methods of Bacteriological investigation; (9) to inspect and describe Carcasses. The fee for the examination for the B.Hy. is £10 10s., and for the degree £6. The fee for the examination and Diploma in Public Health is £10 10s. Holders of the licence in Sanitary Science of the University of Durham, prior to January, 1892, who are Graduates in Medicine of the University of Durham, are entitled to admission to the examination for the Degree of Bachelor in Hygiene without residence.

Degree of Doctor in Hygiene (D.Hy.).—The candidate must be a Bachelor in Hygiene, and must have been engaged for two years subsequently to the date of his acquirement of the degree of Bachelor in Hygiene, in practice, as a Medical Officer of Health. He will be required to write an essay upon some practical Hygienic subject, selected by himself and

approved by the Lecturer on Public Health, and shall be examined thereon, and upon questions relative to the subject of the essay. The essay should not exceed thirty pages. The essays must be forwarded to the Lecturer on Public Health one month before the date of the Examination, and will be retained by the Faculty of Medicine.

Diploma in Public Health (D.P.H.).—The regulations for education and examination for the Diploma in Public Health (D.P.H.) are the same as those for the degree of Bachelor in Hygiene on pp. 613, etc., with the following exceptions, namely: (1) That the candidate is not required to be a Graduate in Medicine of a recognised university; (2) the course of study for the D.P.H. need not be spent at Newcastle-upon-Tyne.

Diploma in Public Health for Medical Practitioners.—The following are the regulations for the Diploma in Public Health, for medical practitioners, registered, or entitled to be registered, on or before January 1st, 1890: (1) The candidate shall be a medical practitioner, registered or entitled to be registered, on or before January 1st, 1890; (2) the candidate shall be required to pass the same examination as that for the ordinary Diploma in Public Health; (3) every candidate wishing to be present for the examination must give at least fourteen days' notice to the Registrar of the College, and must, at the same time, send the examination fee and the necessary certificates; (4) the fee for the examination and diploma is £10 10s.

UNIVERSITY OF ABERDEEN.

The University grants a diploma in Public Health. Candidates for the diploma must have graduated in Medicine in the University, or in a University in the United Kingdom, one year before they receive the diploma; and they must produce evidence of (1) having complied with the regulations of the General Medical Council (see p. 611); (2) of having attended a fever hospital, containing not fewer than fifty beds, for six months; (3) if not a graduate in Medicine of Aberdeen University, of having attended a course in the University in one or more of the subjects embraced in the examination for the diploma. The examination consists of two Parts; Part I (a) Physics, Engineering, and Meteorology; (b) Chemistry, Microscopy, and Bacteriology. Part II (a) General Hygiene; (b) Sanitary Law and Vital Statistics. The examination (which is written and oral) is held in March and July, and notice must be given to the Secretary of the Medical Faculty two weeks before. A detailed synopsis can be obtained from the Dean of the Medical Faculty, or will be found in the University *Calendar* for 1895-96, pp. 418-421. The fee, which must be paid at the time of giving notice, is £5 5s. The fee for re-examination, £1 1s.

UNIVERSITY OF EDINBURGH.

This University confers two degrees in science in the department of Public Health, namely, Bachelor of Science (B.Sc.) and Doctor of Science (D.Sc.).

Bachelor of Science.—Two examinations must be passed, and the candidate must produce evidence of having complied with the regulations of the General Medical Council (see p. 611), and have taken a degree in Medicine in the University of Edinburgh or in a university recognised by it. The subjects of the First Examination are: (1) Laboratory work, practical, written and oral; (2) Elements of Experimental Physics; (3) Geology, written and oral. The Second Examination cannot be taken sooner than six months after the First. The candidate must have attended a course of lectures (fifty at least) in the University of Edinburgh, or in a university recognised by the Court. The subjects of the Second Examination are: (1) Medicine in its application to Public Health; Sanitation; (2) Sanitary Law; (3) Vital Statistics; (4) Medicine in its bearings on Public Health; and the examinations in these subjects are taken at one time; (5) Mensuration and Drawing. (A detailed syllabus is given in the *Calendar*, pp. 424 to 426). The examinations are held in March and July. The fee for each examination is £3 3s. Further particulars may be obtained on application to the Convener of the Science Degree Committee, at the office of the Faculty of Medicine, University New Buildings, where the schedules for examinations are issued and the certificates of candidates examined.

Doctor of Science.—Bachelors of science in the Department of Public Health may, after the lapse of five years, proceed to the degree of Doctor in the same Department, on presenting a Thesis on some subject in the Department of Public Health, or a published memoir of works, and are required to pass an examination in Public Health, and in such of its special departments as may from time to time be determined. Every such Thesis must be certified by the candidate to have been composed by himself, and must be approved by the examiners. The Thesis must be lodged with the Convener of the Science Degrees Committee on or before April 30th, in the year in which the candidate proposes to graduate. The fee is £10 10s.

UNIVERSITY OF GLASGOW.

The diploma of Public Health may be obtained by any Bachelor of Medicine in the University on his passing the required examination twelve months at least after he has taken the degree of M.B. Every candidate for a diploma in Public Health shall produce certificates giving sufficient evidence: (1) that after obtaining the degree of M.B. he has undergone the practical laboratory training required by the General Medical Council (see page 611); (2) that he has for six months practically studied the duties of outdoor sanitary work under the medical officer of health of a county or large urban district.

The examination is written, practical, and oral. The subjects of the examination are as follows: (a) Physics, Meteorology, and Climatology; (b) Chemistry and Biology; (c) General Hygiene; (d) Sanitary Law and Vital Statistics. The fee for the examination is five guineas. A course of instruction is provided by the University, the fee for which is ten guineas. (See *Calendar* for 1895-96, pp. 194-196).

THE CONJOINT BOARD OF SCOTLAND.

The Royal Colleges of Physicians and Surgeons of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow will grant a conjoint diploma in Public Health, after examination by a Board on which these bodies are represented. Candidates qualified before 1890 will be admitted without evidence of special instruction (though even in their case such instruction is strongly recommended). Registered medical practitioners who have for a period of three years held the position of medical officer of health to any county or urban district of more than 20,000 inhabitants, or any entire rural sanitary district are also exempt from courses of special instruction. Other candidates must produce evidence of attendance (subsequent to obtaining a registrable qualification) for six months at a Public Health Laboratory, and for six months under a Medical Officer of Health of a county or large urban district. There are two examinations, and candidates may present themselves for both of them at one period, or for either examination separately. The First Examination embraces the following subjects in their relation to Public Health: Chemistry, Laboratory Work, Physics, and Meteorology. The Second Examination includes Epidemiology, Endemiology, Vital Statistics, Practical Sanitation, and Sanitary Law. The various subjects of both examinations are detached and limited by synopses given. The laboratory work embraces not only Chemical Analyses, but also Microscopical Examination, Bacteriology, Parasites, etc. At the Second Examination each candidate is required to submit a report on the sanitary condition of premises to which he may be sent for the purpose, and is examined on the Acts of Parliament included under "Sanitary Law." The fee is ten guineas, or five guineas in respect of each examination; and candidates referred are readmitted on the fee of three guineas in respect of each examination. The examination is held in Edinburgh or in Glasgow, there being two periods of examination yearly—October and May. Application for examination in Edinburgh to be sent to Mr. James Robertson, 1, George Square, Edinburgh; and in Glasgow to Mr. Alexander Duncan, 242, St. Vincent Street, Glasgow, not later than one week before the examination day.

UNIVERSITY OF DUBLIN.

The diploma in State Medicine is conferred after examination upon M.D.s or graduates in Medicine and Surgery of

Dublin, Oxford, or Cambridge. The name of the candidate must have been on the *Medical Register* at least twelve months before the examination, and, subsequently to registration, the candidate must have completed six months' practical instruction in a laboratory approved by the University, and have studied practical outdoor sanitary work for six months, under an approved officer of health. [This condition does not apply to candidates registered or entitled to be registered on or before January 1st, 1890.] The examination is held in December, and candidates are required to send in their names at least a week before the first day of the examination to the Registrar of the School of Physic, from whom a full syllabus of the examination can be obtained. Candidates who have registered since January 1st, 1890, are required to make application for permission to present themselves for examination to the Board of Trinity College, submitting at the same time certificates of the required courses of study. The subjects of examination are: State Medicine and Hygiene (paper); Chemistry (paper and laboratory); Physics and Meteorology (oral); Engineering (paper); Sanitary Engineering (practical); Morbid Anatomy (oral); Vital Statistics (paper); Medical Jurisprudence (oral); Law (paper).

Further particulars can be obtained on application to the Registrar of the School of Physic, Dublin.

ROYAL UNIVERSITY OF IRELAND.

The University grants a diploma in Sanitary Science, but only to graduates in Medicine of the University. The fee is £2. Further particulars will be found in the *Calendar*.

CONJOINT EXAMINING BOARD IN IRELAND OF THE ROYAL COLLEGE OF PHYSICIANS AND THE ROYAL COLLEGE OF SURGEONS.

A diploma in State Medicine is granted by these two Colleges after an examination conducted by them jointly. Candidates are required to comply with the regulations of the General Medical Council (see page 611). The regulations as to study do not apply to practitioners registered or entitled to be registered on or before January 1st, 1890. The examination comprises the following subjects: State Medicine and Hygiene, Chemistry, Meteorology and Climatology, Engineering, Morbid Anatomy, Vital Statistics, Medical Jurisprudence, Law. The candidates will be examined orally in the Law of Evidence, and practically in the reading of Plans, Sections, and Scales, as well as in Analytical Chemistry, with special reference to Air, Water, and Food, including the use of the Microscope. They will also be required to read meteorological instruments, and to explain their construction; and they may be called upon to make a practical Sanitary Report.

The candidate must return his name to the Secretary of the Committee of Management under the Conjoint Scheme, Royal College of Physicians, 6, Kildare Street, Dublin, three weeks before the examination, and lodge with him a testimonial of character from a Fellow of either of the Colleges, or of the Royal Colleges of Physicians or Surgeons of London or Edinburgh.

The fee for examination is £10 10s.; for re-examination £5 5s.; the examinations begin on the first Tuesday of the months of February, May, and November. The examination, which is in two parts, lasts four days.

A Special Examination for the diploma can be obtained on payment of £5 5s. in addition to the ordinary fees mentioned above, and on giving notice at least one fortnight before the date of the proposed examination.

Schedules of the subjects can be obtained from the Secretary.

INSTRUCTION AND LABORATORY CLASSES.

Courses of lectures and laboratory instruction to suit the requirements of candidates for diplomas in Public Health have been organised at the following schools, and could probably be arranged for at other schools and colleges.

LONDON.

St. Bartholomew's Hospital.—Inclusive fee, 20 guineas.
 Charing Cross Hospital.—Inclusive fee, 20 guineas.
 St. George's Hospital.—Inclusive fee, 20 guineas; for candidates registered before January 1st, 1890, 12 guineas.
 Guy's Hospital.—Inclusive fee for six months' course of Laboratory Instruction and Lectures, 20 guineas.

King's College.
London Hospital.—Inclusive fee, 20 guineas; three months' course, 12 guineas.
St. Mary's Hospital.—Six months' course, inclusive fee, 12 guineas.
St. Thomas's Hospital.—Inclusive fee, 20 guineas; short course, 6 guineas.

University College.
College of State Medicine.

PROVINCIAL.

Cambridge University.
Mason College, Birmingham.
University College, Liverpool.
Yorkshire College, Leeds.
University of Durham College of Medicine.
University College, Bristol.

IRELAND.

School of Physic, Dublin.
The Catholic University School of Medicine.
Royal College of Surgeons, Schools of Surgery, Dublin.

PSYCHOLOGICAL MEDICINE.

THE facilities for the study of mental diseases are now vastly increased, and in addition to the regular lectures given in the different medical schools, post-graduate lectures are also given at the Bethlem Royal Hospital in connection with the London Post-Graduate Course, of which Dr. Fletcher Little, 32, Harley Street, W., is the Hon. Sec. The London County Council is proposing to throw open their large asylums, and contemplate applying to the Conjoint Medical Boards for the recognition of all of them as teaching hospitals. Dr. Savage, at Guy's, and Dr. Rayner, at St. Thomas's, have special classes, with clinical instruction, at Bethlem Royal Hospital; Professor E. W. White lectures at King's College, and gives clinical instruction at the City of London Asylum, near Dartford; Dr. Percy Smith is the Lecturer at Charing Cross; Dr. Claye Shaw at St. Bartholomew's; Dr. Mickle at Middlesex and University College; Dr. Hyslop at St. Mary's; Dr. C. Mercier at Westminster; Dr. J. K. Will at the London Hospital.

In the provinces, also, each medical school has a Lecturer on Psychological Medicine, who gives clinical instruction in a neighbouring asylum; and in Scotland and Ireland similar arrangements exist.

The Royal University in Ireland grants a diploma for proficiency in the treatment of mental diseases under the following conditions:—

The diploma is conferred only on Graduates in Medicine of the University.

Candidates must give notice, in writing, to the Secretaries of their intention to present themselves, and must pay the prescribed fee of £2 at least one month previous to the examination.

Candidates who satisfy the examiners will be required to pay a further fee of £3 before the diploma is conferred.

The subjects for this examination are those prescribed for the Hutchinson Stewart Scholarship for proficiency in the treatment of Mental Diseases.

The Medico-Psychological Association of Great Britain and Ireland also grant a Certificate in Psychological Medicine after a course of training, according to the rules of the Association, to candidates registered under the Medical Act. The examinations are held in London, Scotland, and Ireland twice a year. The fee for the examination is £3 3s. Full particulars may be obtained from the General Secretary, Dr. Fletcher Beach, 64, Welbeck Street, W. The Medico-Psychological Association further gives a Bronze Medal and £10 10s. to Asylum Assistant Medical Officers for the best dissertation on any clinical or pathological subject relating to insanity, and also the Gaskell Prize, value £30.

OPENING OF THE MEDICAL SCHOOLS.

THE arrangements for the opening of the Winter Session of the Medical Schools and Colleges in the United Kingdom, so far as they are at present complete, are as follows:—

METROPOLITAN.

CHARING CROSS HOSPITAL MEDICAL SCHOOL—Tuesday, October 1st. (The annual dinner of the past and present students will not take place till the third week in October.)

GUY'S HOSPITAL MEDICAL SCHOOL—Tuesday, October 1st. At 8 P.M. the first meeting of the Physical Society will be held under the presidency of Dr. Wilks, F.R.S., when Mr. George De'Ath, of Buckingham, will read a paper on Our Profession, Our Patients, Our Public, and Our Press. There will be a House Dinner of the Students' Club before the meeting. After the meeting the rooms of the Club in the College will be open for the exhibition of Instruments, Microscopical Preparations,

and Photographs taken by members of the Society during the past year. All past and present students are invited to attend.

KING'S COLLEGE, LONDON, MEDICAL FACULTY—Tuesday, October 1st.

LONDON HOSPITAL MEDICAL COLLEGE—Tuesday, October 1st. The annual Dinner will take place in the evening at the Criterion, Mr. John Couper in the chair.

LONDON SCHOOL OF MEDICINE FOR WOMEN—Tuesday, October 1st. The opening address will be given at 3.30 P.M. by Miss Ellaby, M.D., Ophthalmic Surgeon, New Hospital for Women.

MIDDLESEX HOSPITAL MEDICAL SCHOOL—Tuesday, October 1st. Introductory Address by W. Julius Mickle, M.D., F.R.C.P.

ST. BARTHOLOMEW'S HOSPITAL MEDICAL SCHOOL—Tuesday, October 1st. The Old Students' Annual dinner will take place in the evening, Mr. Howard Marsh in the chair.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL—Tuesday, October 1st, Introductory Address, at 4 P.M., by George D. Pollock, F.R.C.S.

ST. MARY'S HOSPITAL MEDICAL SCHOOL—Tuesday, October 1st, Introductory Address, at 4 P.M., by Mr. A. F. Laurie, M.A., B.Sc., The Annual Dinner will take place the same evening in the King's Hall, Holborn Restaurant, Mr. Malcolm Morris in the chair.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL—Wednesday, October 2nd. The prizes will be delivered at 3 P.M. by Sir Edwin Arnold, K.C.I.E., C.S.I., who will afterwards deliver an address. The annual dinner, in which all former and present students are invited to join, will take place the same evening at the Hôtel Métropole at 6 for 6.30 P.M., Dr. F. J. Payne in the chair.

WESTMINSTER HOSPITAL MEDICAL SCHOOL—Tuesday, October 1st. The Introductory Address will be delivered at 4 P.M. by Dr. Monckton Copeman. The Prizes will be distributed by the Right Honourable Viscount Peel, late Speaker of the House of Commons. The Annual Dinner will take place at the Café Monico at 7 P.M., Dr. de Havilland Hall in the chair.

UNIVERSITY COLLEGE, MEDICAL FACULTY—Tuesday, October 1st. The Introductory Address will be delivered at 4 P.M. by Professor J. Ross Bradford, M.D., F.R.S. The Annual Dinner of the Old and Present Students will take place at 6.30 P.M. at the Hôtel Métropole, Sir Richard Quain, Bart., M.D., in the chair.

PROVINCIAL.

BIRMINGHAM, MASON COLLEGE—Tuesday, October 1st. An introductory address will be delivered by Professor Percy Frankland, F.R.S., on Pasteur and His Work: the Debt of Medicine to Chemistry.

BRISTOL UNIVERSITY COLLEGE—Tuesday, October 1st.

LEEDS, YORKSHIRE COLLEGE—Tuesday, October 1st. The Introductory Address will be delivered at 4 P.M. by Professor D. J. Leech, M.D., F.R.C.P., Senior Physician, Manchester Royal Infirmary, Member of the General Medical Council, etc. Professor Leech will afterwards distribute the prizes.

LIVERPOOL, UNIVERSITY COLLEGE—Tuesday, October 1st. The Introductory Address will be delivered by Mr. Jonathan Hutchinson, F.R.S.

MANCHESTER, OWENS COLLEGE—Tuesday, October 1st.

NEWCASTLE, UNIVERSITY OF DURHAM COLLEGE OF MEDICINE—Tuesday, October 1st. The scholarships and prizes will be delivered by the Dean of Durham, Warden of the University.

SHEFFIELD SCHOOL OF MEDICINE—Tuesday, October 1st. The Introductory Address will be delivered at 4.30 P.M. by Professor Victor Horsley, F.R.S., F.R.C.S.

SCOTLAND.

UNIVERSITY OF EDINBURGH—The medical classes open on Tuesday, October 15th; the Anatomy Rooms and Laboratory Courses on October 1st.

THE EDINBURGH SCHOOL OF MEDICINE—The session commences on Tuesday, October 15th. The Practical Anatomy Rooms and Chemical Laboratories will be opened on October 1st.

THE MEDICAL COLLEGE FOR WOMEN, EDINBURGH—Tuesday, October 15th.

EDINBURGH SCHOOL OF MEDICINE FOR WOMEN—Tuesday, October 15th.

THE UNIVERSITY OF ABERDEEN—Tuesday, October 15th.

THE UNIVERSITY OF GLASGOW—Tuesday, October 22nd. Opening Address by one of the Professors.

UNIVERSITY OF GLASGOW: QUEEN MARGARET COLLEGE, MEDICAL SCHOOL FOR WOMEN—Tuesday, October 22nd.

ST. MUNGUO'S COLLEGE, GLASGOW—Wednesday, October 23rd. Introductory Address by Professor Napier, M.B.Lond., F.R.C.S.

ANDERSON'S COLLEGE MEDICAL SCHOOL, GLASGOW—Tuesday, October 22nd.

THE UNIVERSITY OF ST. ANDREWS—Tuesday, October 8th.

UNIVERSITY COLLEGE, DUNDEE—Tuesday, October 15th.

IRELAND.

TRINITY COLLEGE, DUBLIN—The Dissecting Rooms will be opened on October 1st; the Lectures will begin on November 1st.

CATHOLIC UNIVERSITY MEDICAL SCHOOL, DUBLIN—Dissecting Room open October 1st; Lectures November 2nd.

SCHOOLS OF SURGERY OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND—Dissecting Room open on October 1st; Lectures November 1st.

QUEEN'S COLLEGE, CORK—Monday, October 21st.

QUEEN'S COLLEGE, BELFAST—Tuesday, October 29th.

MME. GUILLEMOT has bequeathed £8,000 to the Paris Hôtel Dieu.

THE total number of students in the French Medical Faculties in 1894 was 7,510, of whom 1,059 were foreigners.

ANTIRABIC VACCINATIONS AT SAIGON.—Dr. J. Pineau, Director of the Pasteur Institute at Saigon, Cochinchina, reports that from May 1st, 1893, to May 1st, 1894, the number of persons treated there by preventive inoculations was 49, 31 of whom were Europeans and 18 natives. There were only 2 deaths.