Examination papers [of the] Medical Department of the University of Leeds, 1913-1915.

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THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

Friday, December 12, 1913, 10–12.30

SURGERY

[*Not more than* FOUR *questions to be answered*]

1. Describe the lesions met with in the lips, palate and fauces resulting from inherited syphilis.

2. Give the pathology, complications and treatment of alveolar abscess in the lower jaw.

3. Give an account of cleft palate, mentioning the varieties and explaining how they affect mastication, deglutition and speech.

4. How would you deal with a case in which suffocation was threatened from the impaction of a foreign body in the larynx?

5. What are the causes of enlarged cervical glands? Give the distinguishing clinical features of the chief pathological forms.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

(Part II)

Friday, December 11, 1914, 10–12.30

SURGERY

[*Not more than* FOUR *questions to be answered*]

1. What is a ranula? Give its pathology and treatment.

2. What are the immediate and remote complications that may result from a tooth entering the air-passages during an operation for the extraction of teeth?

3. Describe a method of inducing general anaesthesia by means of nitrous oxide gas and oxygen. Give an account of the necessary apparatus.

4. What are the signs, symptoms and treatment of fracture of the lower jaw in the neighbourhood of a canine tooth? Mention any possible complications.

5. Give an account of the frontal sinus under the following heads:—

(*a*) its anatomy;

(*b*) the symptoms of infection of the sinus and the treatment of this condition.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

Tuesday, June 22, 1915, 10–12.30

SURGERY

[*Not more than* FOUR *questions to be answered.*]

1. Describe the primary lesion of syphilis as met with on the lower lip and the treatment you would adopt.

2. Describe the clinical features of the common (parenchymatous) form of goitre and the forms of respiratory embarrassment to which it may give rise. How would the presence of a goitre influence the selection and administration of a general anaesthetic for an operation on the teeth?

3. Describe the common form of fracture of the neck of the femur met with in elderly women. How would you diagnose and treat it?

4. Give an account of the condition known as chronic superficial glossitis, or leukoplakia of the tongue.

5. Give the signs and the pathology of an epithelial odontome.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

Thursday, June 19, 1913, 10–12.30

DENTAL SURGERY, PATHOLOGY AND BACTERIOLOGY

1. Give the causes, diagnosis, symptoms, and treatment of an alveolar abscess connected with a second maxillary permanent incisor.

2. What is 'pyorrhoea alveolaris'? What are its causes, pathology, and treatment?

3. What changes occur in the dental pulp during hyperaemia and inflammation? What retrogressive changes is it subject to?

4. What methods do you adopt to reduce pain in preparing a cavity for a simple filling?

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

Saturday, December 13, 1913, 10–12.30

DENTAL SURGERY. PATHOLOGY AND BACTERIOLOGY.

1. Give the classification of odontomes and describe fully one variety.

2. A child of twelve years old has an 'underhung bite' —the molars being in mesial occlusion. Describe the treatment.

3. Discuss the cause of 'erosion' of teeth.

4. Describe the pathological changes which an abscess at the root of a deciduous molar may cause in its permanent successor.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

(Part II)

Saturday, December 12, 1914, 10–12.30

DENTAL SURGERY, PATHOLOGY AND BACTERIOLOGY

1. What are the clinical symptoms of pyorrhoea alveolaris (*a*) in the early stage, (*b*) in the later stages? Give the treatment in the early stage.

2. State how pain of a periodontal origin can be diagnosed from that caused by disease of the pulp. To what may it be due?

3. What form of mal-occlusion of the teeth should be treated by 'jumping the bite'? Describe how this may be done.

4. For what purpose are the following drugs used in dentistry? State the dangers attending their use and how they may be guarded against:—arsenious acid, carbolic acid, iodine, silver nitrate.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

Wednesday, June 23, 1915, 10–12.30

DENTAL SURGERY, PATHOLOGY, AND BACTERIOLOGY

1. The progress of caries in a living tooth may cause changes in the dentine and tooth pulp which may retard the progress of the disease. Describe these changes.

2. Discuss the pathology and bacteriology of pyorrhea alveolaris.

3. What are the causes of excessive haemorrhage following the extraction of a tooth? How would you treat it?

4. Give the method of diagnosing a fracture of a mandible. What complications may follow?

5. Compare 'fillings' and 'inlays' as methods for treating carious teeth, giving their advantages and disadvantages.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination
(Part II)

Monday, December 13, 1915, 10–12.30

DENTAL SURGERY, PATHOLOGY, AND BACTERIOLOGY

[*Not more than* FOUR *questions to be answered*]

1. Classify cases of mal-occlusion of the upper and lower teeth, and briefly explain their causation.

2. What pathological conditions of the neighbouring parts may be caused by a septic pulp in an upper canine tooth?

3. State briefly the various types of crowns, and compare their advantages and disadvantages.

4. Describe the part played by bacteria in dental caries.

5. Describe exactly the conditions which would lead you to treat a case of crowding of the permanent teeth (*a*) by extraction, (*b*) by expansion.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
First Professional Examination

Thursday, December 12, 1912, 10–12.30

DENTAL METALLURGY

1. Give an account of alloys, discussing especially what is known of their constitution. What is meant by a eutectic alloy?

2. What impurities are found in zinc? How can it be purified and renovated for dental purposes?

3. How is gold extracted from its ores? Describe a method for the separation of platinum from gold, applicable to an alloy of these metals.

4. Give some account of the constitution of the more commonly used non-metallic fillings.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
First Professional Examination

Saturday, June 22, 1912, 10–12.30

DENTAL METALLURGY

1. How would you prepare a specimen of pure gold from a sovereign and of pure silver from a shilling?

2. Give a list of the various substances that are used as fuels in metallurgical operations, pointing out the advantages and disadvantages of each.

3. How is lead prepared from its ores? Give some account of the uses of lead to the dentist.

4. Write a short essay on alloys, discussing as far as you can their nature and constitution and illustrating with examples.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
First Professional Examination

Friday, June 20, 1913, 10–12.30

DENTAL METALLURGY

1. Give some account of the methods available for the measurement of high temperatures, pointing out any likely sources of error.

2. From what source is cadmium obtained? How is the metal prepared and what are its chief properties and uses?

3. State the composition and uses of the following:— Babbit's metal, meter metal, Spence's metal, fusible metal, gun metal, Britannia metal.

4. Describe the chief types of furnaces, and give one instance of the practical application of each type in actual metallurgical practice.

THE UNIVERSITY OF LEEDS

Degree of B.Ch.D.

First Examination (Part III)

Wednesday, December 17, 1913, at 10 a.m.

DENTAL METALLURGY. PRACTICAL

Determine by the method of dry assay the percentage of silver contained in the alloy supplied.

THE UNIVERSITY OF LEEDS

Degree of B.Ch.D.
First Examination

(Part III)

Saturday, December 12, 1914, 10–12.30

DENTAL METALLURGY

1. Give some account of the modern methods of extracting gold from natural sources. Point out the chief uses and advantages of this metal in the dental laboratory.

2. State the nature, methods of preparation, and uses of vermilion, purple of Cassius, dental alloy, aluminium bronze.

3. What properties are desirable in an amalgam for use as a filling? State how the defects peculiar to certain metals in this connexion are eliminated as far as possible.

4. Mention the more important materials used as dies and counter dies in the dental laboratory. What precautions are necessary in the preparation and use of these?

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
First Professional Examination

Monday, December 13, 1915, 10–12.30

DENTAL METALLURGY

1. What are the chief sources of silver? How is the metal prepared, and how purified?

2. Explain what is meant by hardness, malleability, conductivity. How are metals tested with respect to these properties?

3. Give some account of the composition and uses of the solders in general use in a dental laboratory.

4. Discuss the nature and properties of the non-metallic fillings with which you are familiar.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
First Professional Examination

Monday, June 24, 1912, 10–12.30

DENTAL MECHANICS

[*Not more than* THREE *questions to be answered*]

1. Describe how you would take an impression of the mouth. Under what conditions would you use—

(*a*) Plaster,

(*b*) Composition,

(*c*) Wax,

(*d*) Gutta Percha ?

2. Give a short description of the several points to be observed in the mounting of a complete set of artificial teeth.

3. What are the constituents of dental porcelain ?

4. Describe the method of making an aluminium denture.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
First Professional Examination

Thursday, June 19, 1913, 10–12.30

DENTAL MECHANICS

1. Describe three methods of making special trays for taking impressions, and what impression material you would use with each.

2. Mention the purely mechanical factors which contribute to the retention of dentures in the mouth.

3. Write a short description of dental porcelain.

4. What changes take place during the 'setting' of plaster of Paris?

5. Under what circumstances is it advisable to use spiral springs for the retention of dentures? What principles must be remembered during their adaptation, and what precautions must be taken during their use?

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
First Professional Examination

Tuesday, June 23, 1914, 10–12.30

DENTAL MECHANICS

[*Not more than* THREE *questions to be attempted*]

1. Describe the process of making a Kingsley artificial velum.

2. Describe the method of obtaining dies for the striking up of a metal bar lower from a cast of the mandible in which the incisors and canines remain, there being a distinct undercut on the lingual surface.

3. Enumerate the causes which may lead to the cracking of porcelain teeth during soldering. What precautions would you take to prevent this?

4. Discuss the following articulators:—
   (*a*) Slab.
   (*b*) Hinge.
   (*c*) Anatomical.

THE UNIVERSITY OF LEEDS

Degree of B.Ch.D.
First Examination

(Part III)

Friday, December 11, 1914, 10–12.30

DENTAL MECHANICS

[*Not more than* THREE *questions to be answered*]

1. Discuss the retentive value of the following clasps :—

   (*a*) loop clasp.
   (*b*) plate clasp.
   (*c*) wire clasp.

2. What indications would suggest to you the use of the following crowns? State the advantage and disadvantage of each.

   (*a*) gold shell crown.
   (*b*) Richmond crown.
   (*c*) Dowel crown.

3. Under what conditions would you use composition, gutta-percha, and plaster of Paris for taking impressions of the mouth?

4. Write a short description of the preparation of dental rubbers, both Base (red) and Gum (pink). Give formulae for each of these.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
First Professional Examination

Saturday, December 11, 1915, 10–12.30

DENTAL MECHANICS

[*Not more than* THREE *questions to be attempted*]

1. Describe the construction of three different kinds of crowns, and discuss their relative advantages.

2. Give the various aids to the retention of artificial dentures. Explain fully the conditions under which each should be employed.

3. Describe the method of making a Kingsley's belum.

4. Given a plaster cast with marked undercuts, how would you obtain metal dies therefrom ?

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

Monday, June 24, 1912, 10–12

ANATOMY

[*Not more than* FOUR *questions to be answered*]

1. Describe fully the antrum of Highmore, and state how and when it is developed.

2. Where are valves found in connexion with the arterial system? Describe one of these valves.

3. Describe the superior aperture of the larynx.

4. Describe the left phrenic nerve, and state how it differs from its fellow of the opposite side.

5. Describe the form, position, and relations of the stomach.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

Thursday, December 12, 1912, 10–12.30

ANATOMY

[*Not more than* FOUR *questions to be answered*]

1. Describe the lingual artery and its branches.

2. Name the muscles which depress the mandible, give the attachments and nerve supply.

3. Describe briefly the outer wall of the nasal cavity as seen in the unmacerated condition. Name and locate the various openings seen in it.

4. Describe the arch of the aorta, giving its relations to neighbouring structures.

5. Name and indicate the position and sources of origin of the cutaneous nerves of the face.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

Thursday, June 19, 1913, 10–12.30

ANATOMY

1. Write a short account of the naked eye appearance of the mucous membrane of the tongue. What nerves can be traced to it, and to what regions are they distributed?

2. Describe the superficial cervical plexus, name its branches, give their source of origin and state to what regions they are distributed.

3. Describe the internal carotid artery in the neck.

4. What is the middle mediastinum and what are its chief contents?

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

Saturday, December 13, 1913, 10–12.30

ANATOMY

[*Not more than* FOUR *questions to be answered*]

1. Describe the maxillary antrum and explain its relationships to neighbouring nerves and vessels.

2. Describe the temporo-mandibular articulation and explain the movements which take place at it.

3. Enumerate in order the parts of the alimentary canal which lie within the abdomen and indicate shortly the position of each part you mention.

4. Explain the course of the blood stream within the heart; and name the valves, giving the positions of each, over which the blood flows.

5. Describe the position of the radial artery at the wrist and give its relationships.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

(Part I)

Saturday, December 12, 1914, 10–12.30

ANATOMY

[*Not more than* FIVE *questions to be answered*]

1. Enumerate the larger glands which pour their secretion into the mouth, and indicate the positions in which their ducts open.

2. Contrast the mandible of an infant with that of a young adult.

3. Enumerate and describe the structures which are met with in a typical diarthrodial articulation.

4. Describe the manner in which a typical spinal segmental nerve is attached to the spinal cord.

5. Enumerate the larger blood-vessels which supply the teeth, cheeks, lips, palate, and tongue. Give the source of each vessel you name.

6. What structures enter the lung and how are they arranged?

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

Tuesday, June 25, 1912, 10–12

PHYSIOLOGY

[*Not more than* FOUR *questions to be answered*]

1. What is meant by the term 'blood pressure' in the arteries? How is it produced and maintained? What will the effect of the following be upon the systemic blood pressure—Haemorrhage from a medium sized artery, the movement from the erect to the recumbent position of the body, shock?

2. How is ordinary respiration performed? State how the gaseous exchange between air and blood is brought about in the lungs. Of what value is haemoglobin in respiration and why is the blood plasma not sufficient to carry the amount of oxygen required by the tissues?

3. How is the act of deglutition performed? What difference is there in the manner of swallowing solids and fluids? Is it possible to arrest this process by an act of the will?

4. Describe how a temporary tooth is shed. Compare it with any similar process that occurs in any other part of the body. How is it that enamel once formed cannot be renewed?

5. Describe the structure of the inner ear and explain how sound waves gain access to it.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

Friday, December 13, 1912, 10–12.30

PHYSIOLOGY

[*Not more than* FIVE *questions to be attempted*]

1. In what positions is ciliated epithelium found in the human body? What are its functions and how is its movement kept up?

2. What is the composition (structurally) of mammalian blood? How are the red and colourless corpuscles renewed? Describe the process of coagulation of the blood. How can it be artificially hastened and retarded?

3. Describe in outline the arrangement of the nervous system of a mammal. What are the chief afferent and efferent channels and what are the essential factors in a reflex action?

4. Describe the minute structure of the pancreas. What are the chief constituents of the secretion which it produces and the effects exerted by them on food-stuffs in the intestine?

5. Describe the act of swallowing. How is it brought about and how executed?

6. What is the structure of the internal ear by means of which it is believed that sound is perceived? Explain how the vibrations of the external air reach the internal ear and indicate the portion of the cerebral hemisphere with which it is connected.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

Friday, June 20, 1913, 10–12.

PHYSIOLOGY

[*Not more than* FIVE *questions to be attempted*]

1. What changes occur in a voluntary muscle when it contracts?

Draw a simple muscle curve, stating the time duration of each of its parts.

2. How is it possible to ascertain from outside the body that the heart is beating? State the value of the signs so recognizable. In the event of the heart ceasing to beat in a person what would you do to restore its action, and why?

3. What are the principal constituents of bread and how are these affected by the saliva and gastric juice respectively?

4. How is the urine secreted by the kidney? What is the composition of the urine, the quantity passed in 24 hours, and its specific gravity? How may the quantity of urea, passed in 24 hours, be affected by the nature of the food?

5. What is meant by 'positive accommodation' in the eye for clear vision? Why is it necessary?

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

(Part I)

Monday, December 14, 1914, 10–12·30

PHYSIOLOGY

[*Not more than* FIVE *questions to be answered.*]

1. Give an account of a 'muscle twitch' and explain how the duration of its several phases has been determined. How is it affected by (*a*) heat, (*b*) cold, (*c*) drugs? Explain what is meant by 'physiological tetanus'.

2. Give a general account of the structure of the liver and its physiological relations to the vascular and digestive systems. State categorically the functions of the liver and compare them with those of the pancreas.

3. Give an account of mixed saliva. Explain how saliva is secreted in man. Describe carefully the minute structure of the human submaxillary gland.

4. Explain fully what is meant by a reflex spinal act. Illustrate your answer by at least three such acts. Describe as seen with a low power of the microscope the appearance of a transverse section of the human spinal cord in (*a*) the mid-dorsal region, and (*b*) the cervical enlargement.

5. Give an account of (*a*) the pressure, (*b*) the velocity of the blood in (i) capillaries, (ii) large arteries, (iii) large veins. What forces are concerned in maintaining the circulation of the blood? What is your estimation of the relative value of each of these forces?

6. Describe the corpuscular elements that exist in normal human blood. Give an account of coagulation of the blood and the conditions which (*a*) retard and (*b*) accelerate the process.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

Saturday, December 14, 1912, 10–12.30

DENTAL ANATOMY AND PHYSIOLOGY

[*Not more than* FIVE *questions to be answered*]

1. What are meant by the following terms:—'bunodont,' 'gnathic index,' 'gubernaculum,' 'epithelial sheath of Hertwig'?

2. Describe the oral epithelium.

3. Compare the anatomical characters of the deciduous molars of Man.

4. Describe the movements of the mandible, and the forces determining them.

5. What relationship exists between the maxillary teeth and the antrum of Highmore?

6. Describe the amelo-dentinal junction.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

Saturday, June 21, 1913, 10–12

DENTAL ANATOMY AND PHYSIOLOGY

[*Not more than* FIVE *questions to be answered*]

1. Give a short account, with the dates, of the commencement of calcification of the individual deciduous and permanent teeth of man.

2. How are the nerves in the dental pulp arranged? By what means can they be demonstrated?

3. Describe the sockets of the human teeth, giving as fully as possible the relationships of the parts at their cervical margins.

4. At what stages of development have the permanent teeth in the upper jaw arrived at the age of seven years? How are they then situated in relation to the existing temporary teeth?

5. Enumerate the distinctive anatomical peculiarities of the dental system, including the temporo-maxillary articulation in man, compared with that of the tiger and the cow; giving the object of such modifications in each instance.

6. Describe the origin, structure and functions of the alveolo-dental membrane.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

Friday, December 12, 1913, 10–12.30

DENTAL ANATOMY AND PHYSIOLOGY

[*Not more than* FIVE *questions to be answered*]

1. How would you distinguish a second mandibular deciduous molar from the first molar of the permanent series?

2. Give the dates of eruption of the permanent series of human teeth.

3. Describe Nasmyth's membrane, giving an account of its origin and function.

4. What is meant by 'adaptive modification'? Illustrate your answer by reference to the teeth of mammals.

5. Explain the following terms:—pleurodont, cingulum, oblique ridge, hypsodont, bunodont.

6. Describe the development of an enamel organ up to, but not including, the commencement of calcification.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

(Part I)

Friday, December 11, 1914, 10–12.30

DENTAL ANATOMY AND PHYSIOLOGY

[*Not more than* FIVE *questions to be answered*]

1. Explain the meaning of the terms analogous, homologous, bunodont, acrodont, homodont dentition.

2. Describe a typical carnivorous dentition.

3. What are the sheaths of Newmann? How can they be demonstrated under the microscope?

4. Describe a transverse section of the pulp of a tooth taken at or about the neck and examined under a $\frac{1}{6}$-inch objective.

5. How would you differentiate between a first upper and a first lower molar of the permanent series?

6. Write an account of the enamel organ including the functions of its component cells.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

Saturday, June 21, 1913, 10–11.30

DENTAL MATERIA MEDICA AND THERAPEUTICS

1. What are the usual modes of administration of drugs? Give examples.

2. How is perchloride of mercury obtained? What are its incompatibilities, dosage, and preparations?

3. What are the phenomena of ether anaesthesia?

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

Friday, December 12, 1913, 2–3.30

DENTAL MATERIA MEDICA AND THERAPEUTICS

1. State the advantages and disadvantages of the more important local anaesthetics used in operations in the mouth and describe in detail how one of these should be used during the extraction of a tooth.

2. Explain the action of a counter-irritant and give the composition of the preparations used in dentistry.

3. Enumerate the chief antiseptic drugs (official) and write a prescription for an antiseptic mouth wash.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination

Tuesday, June 23, 1914, 2–3.30

DENTAL MATERIA MEDICA AND THERAPEUTICS

1. State the method of treatment suitable for a case of 'Pyorrhoea alveolaris'.

2. Enumerate the drugs which may be used in a case of syncope and state the doses and method of administration.

3. Write a prescription for—

(*a*) A dentifrice for ordinary use.

(*b*) An antiseptic mouth-wash.

(*c*) An astringent mouth-wash.

(*d*) A mouth-wash containing Chlorate of Potash.

THE UNIVERSITY OF LEEDS

Diploma in Dental Surgery
Final Examination
(Part II)

Friday, December 11, 1914, 2–3.30

DENTAL MATERIA MEDICA AND THERAPEUTICS

1. Enumerate the drugs used to arrest alveolar haemorrhage. State how they are used and how they act.

2. Write a prescription for a dental plaster; a paste for mummification of the pulp; a devitalizing fibre.

3. What are the symptoms of cocaine poisoning, and how should they be treated?

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Second Examination

Thursday, December 12, 1912, 10–1

ANATOMY

[*Not more than* FIVE *questions to be answered*]

1. Describe fully the interosseous nerves of the forearm.

2. Describe the first rib and state precisely its relation to nerves and blood-vessels.

3. Describe the ischio-rectal fossa; enumerate and give the relative position of its contents.

4. Give the origin, course, branches and relative anatomy of the dorsalis pedis artery.

5. Describe the medio-tarsal articulation; state what movements are allowed at it and name the muscles producing those movements.

6. Give a general account of the external appearances of the medulla oblongata and state precisely what cranial nerves are attached to it and where.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Second Examination

Saturday, December 13, 1913, 10–1

ANATOMY

[*Not more than* FIVE *questions to be answered*]

1. Describe the course and distribution of the hypoglossal nerve, mentioning its more important relationships.

2. The peritoneal cavity having been opened, describe a dissection to expose the right renal artery.

3. Enumerate the tendons inserted into the medial aspect of the upper end of the tibia, explain the actions of the muscles to which they belong and name the nerve supply of each of these muscles.

4. Describe the pons Varolii. Give the position of the cranial nerve nuclei found in it and indicate briefly the composition of the white matter.

5. Describe the ligaments which connect the radius and ulna, and explain the movements which take place at the radio-ulnar joints.

6. Describe the course of the thoracic portion of the oesophagus and explain in what manner it is related to the trachea, aorta, heart, vagi and vertebral column.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Second Examination

Thursday, June 19, 1913, 10–1

ANATOMY

[*Not more than* FIVE *questions to be answered*]

1. Describe the hyoid bone, name the structures attached to it and indicate precisely their sites of attachment.

2. Describe the internal carotid artery from its entrance into the skull to its termination.

3. Describe the radial artery at the wrist, name and indicate the distribution of its branches.

4. Describe the hip joint.

5. Describe the right ureter and state what you know of its development.

6. Enumerate, and give the attachments, nerve-supply, and actions of the muscles grouped as the first layer of the sole of the foot.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Second Examination

Wednesday, June 24, 1914, 10–1

ANATOMY

[*Not more than* FIVE *questions to be answered*]

1. The abdomen having been opened, describe carefully a dissection to expose fully the left kidney.

2. Explain how the *corpora quadrigemina* may be displayed by dissection after the brain has been removed from the cranium. Give the important relationships of these bodies.

3. Describe the position and relationships of the ascending portion of the thoracic aorta.

4. Give an account of the vascular supply of the thigh.

5. Describe the surfaces of bone which articulate at the shoulder-joint. What movements take place at this joint? Describe shortly how they are effected.

6. Describe the form, position, and connexions of the Eustachian tube. What is the embryonic source of this passage?

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Second Examination

Friday, December 13, 1912, 10–1

PHYSIOLOGY

[*Not more than* FIVE *questions to be answered*]

1. Explain the mechanism by which the flow of blood into the heart, during diastole, is effected. By what method is it possible to obtain a graphic record of the cardiac cycle in man?

2. Classify the chemical constituents in an adequate diet. What is the calorific value of each group and the part it plays in the nutrition of the body? What percentage of the body weight is required for daily nutrition? Give the composition of an average diet for a man of average weight.

3. Describe briefly the development of the central nervous system and the growth of peripheral nerves. Explain what is meant by the neurone theory and show in a diagram the arrangement of grey and white matter in the spinal cord.

4. Describe the structure and functions of the spleen. What changes of volume does it undergo, and how may they be recorded?

5. Explain how images of external objects are formed upon the retina. Describe the structure of the iris and its uses. What nerves supply the iris and what is the function of each?

6. Contrast the composition of inspired and expired air and explain how this change is brought about in the lungs.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Second Examination

Friday, June 20, 1913, 10-1

PHYSIOLOGY

[*Not more than* FIVE *questions to be answered*]

1. Describe in detail the microscopical structure of a neuron and state the effects which follow over-stimulation of and deprivation of the blood-supply from nerve cells.

2. Describe the act of external respiration, stating the composition and volume of the air breathed and the way in which the gaseous interchange is brought about in the lungs.

3. Name the 'special senses' and describe in what manner they differ from or resemble each other. Why is it assumed that the cochlear portion of the internal ear is the end organ for hearing? Describe its structure.

4. Describe the minute structure of the liver. Enumerate its functions. Under what blood-pressure does the organ work and what is the amount of lymph discharged? What does the term 'sinusoid' mean in relation to the structure of this organ?

5. What is the minute structure of the precentral convolution and how does it differ from that of the occipital cortex? What is the effect of removal of the grey matter of the 'motor' area on one side in the monkey?

6. Explain how coagulation of the blood is caused and may be accelerated or prevented. Of what use is this property of the blood?

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Second Examination

Friday, June 20, 1913, 10–1

PHYSIOLOGY

[*Not more than* FIVE *questions to be answered*]

1. Describe in detail the microscopical structure of a neuron and state the effects which follow over-stimulation of and deprivation of the blood-supply from nerve cells.

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THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.

Second Examination

(Part I)

Monday, December 14, 1914, 10–1

PHYSIOLOGY

[*Not more than* FIVE *questions to be answered*]

1. Where does smooth muscle occur in the human body? What functions does it serve in the organs in which it occurs? Describe (*a*) the minute structure of smooth muscle, (*b*) the means by which it is connected to the central nervous system, (*c*) the mode in which nerve-fibres end in it. Compare generally its physiological properties with those of striped muscle.

2. Give an account of (*a*) the chromo-proteins that occur in blood, (*b*) the globulins of blood plasma. Explain the term 'biological reaction'. What is its significance?

3. State the order and explain the events that make up a 'cardiac cycle'. Give an account of the uses of (*a*) the intrinsic, (*b*) the extrinsic nervous mechanism regulating the beat of the mammalian heart. How is the work of the heart determined?

4. What do you know about the sugars that occur normally in the fluids of the human body? How is cane sugar digested? What becomes of the products so formed? What is the 'respiratory quotient', how may it be caused to vary and what is its significance?

5. Describe the minute structure of sensory nerve-terminals in (*a*) muscle, (*b*) skin, and (*c*) cornea. Write an account of the 'knee-jerk' and explain its practical importance.

6. Explain the following terms:—synapse; recurrent sensibility; direct vision; dead space; poikilothermal animal; Sanson's images; pulse delay; antigen; autolysis; spinal animal.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Second Examination

Thursday, June 24, 1915, 10–1

PHYSIOLOGY

[*Not more than* FIVE *questions to be attempted*]

1. Describe the minute structure of the duodenum. What changes does the chyme undergo in it and what are the various factors which bring them about?

2. Give an account of the minute structure and the functions of the adrenal gland. On what evidence is our knowledge of its functions based?

3. In what parts of the human body is elastic tissue found? State its uses in the sites you mention, and describe methods for demonstrating it in permanent stained preparations. What is its chemical composition?

4. Explain the mechanism by which the frequency and depth of the respiratory movements are regulated. How are the following produced: (*a*) apnœa, (*b*) Cheyne-Stokes breathing?

5. Describe briefly the experimental methods used for measuring the blood pressure in the systemic arteries, capillaries, and veins. What differences of pressure are observed, and how are they caused?

6. To what extent has the cortex cerebri been mapped out as subserving different functions? What methods have been used to obtain this knowledge?

[N.B.—*Illustrate your answers by diagrams*]

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Second Examination

Saturday, June 22, 1912, 10–12

PHARMACY

[*Not more than* FOUR *questions to be answered*]

1. Enumerate the preparations of quinine and its salts, with their doses. What do you know of their solubility in water? How would you prepare a solution of a quinine salt suitable for intravenous injection?

2. What are the preparations of aloes and what is the nature of its active principle? What other drugs contain principles nearly related chemically?

3. How would you proceed to extract the alkaloids from nux vomica? What alkaloids would you expect to find and what chemical tests may be applied to show their alkaloidal nature?

4. What are the chief inorganic drugs with pronounced alkaline reaction? Give their doses and their approximate solubility in water.

5. Describe how the following are prepared:—pilula ferri, unguentum hydrargyri, pilula ipecacuanhae cum scilla, syrupus scillae, lamella atropinae, injectio morphinae hypodermica.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Second Examination

Saturday, December 14, 1912, 10–12

PHARMACY

[*Not more than* FIVE *questions to be answered*]

1. What active principles are obtained from belladonna and what do you know of their chemical constitution? Mention any other plants which contain any of these principles. What artificial modification of one of these principles is used in medicine? Give four preparations containing these principles with their strength and doses.

2. What preparations of iron may be dispensed in the form of pills? Name three preparations which are generally ordered in solution. Give prescriptions to illustrate your answers.

3. What pharmacopoeial preparations contain both vegetable and saline purgatives? Give their composition and doses.

4. What preparations of lead are used for their action on the alimentary canal? Mention the constituents of compound preparations and give prescriptions and doses.

5. Write prescriptions containing (*a*) filix mas, (*b*) salol, (*c*) digitalis, (*d*) mercury and iodide of potassium.

6. What is meant by physiological assay and to what drugs is it applied?

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Second Examination

Tuesday, June 23, 1914, 10–12

PHARMACY

[*Not more than* FOUR *questions to be answered*]

1. From what part of the plant are the following drugs obtained :—Elaterium, Aloin, Opium, Oil of Turpentine, Camphor, Oil of Peppermint ?

2. What objections might be urged against prescribing chloral hydrate with alkalis, sweet spirits of nitre with ferric salts, and subnitrate of bismuth with mucilage of acacia ?

3. Give the composition of the following :—

Pilula Ferri,
Pilula Saponis Composita,
Pilula Rhei Composita,
Tinctura Camphorae Composita,
Liquor Arsenicalis.

4. What preparation of mercury might be used for each of the following purposes :—a lotion ; an eye ointment ; a dusting powder ; a mixture for internal use ?

5. Enumerate the preparations with their doses of Belladonna, and specify those which are standardized.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Second Examination
(Part II)

Friday, December 11, 1914, 10–12

PHARMACY

[*Not more than* FOUR *questions to be answered*]

1. What do you know of the nature and origin of the following drugs:—paraffinum molle, caffeina, copaiba, glycerinum, oleum terebinthinae?

2. Give the composition and doses of the following preparations:—

Liquor Hydrargyri et Arsenii Iodidi;
Liquor Iodi Fortis;
Spiritus Ammoniae Aromaticus;
Tinctura Opii;
Liquor Atropinae Sulphatis;
Pilula Rhei Composita.

3. What are the sources and physical characters of salicylic acid and salicylate of sodium? Give the official doses.

4. Give the sources, physical characters, active principles and preparations, with their doses, of Socotrine aloes and Calabar bean.

5. Explain with examples the meaning of the following terms:—liniment, emulsion, oleo-resin, saponin, green extract, drachm and metrical system.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Second Examination

Tuesday, June 22, 1915, 10–12

PHARMACY

[*Not more than* FOUR *questions to be answered*]

1. What are the chief constituents of ipecacuanha? Give the pharmacopoeial preparations and their doses, and two prescriptions containing ipecacuanha.

2. What is the active principle of Kino? Describe its reactions. Mention the preparations and doses of Kino.

3. Describe how a tincture is made, and write prescriptions containing tincture of nux vomica and tincture of calumba.

4. What is a glucoside? Give four drugs of which the chief constituents are glucosides.

5. Describe the physical and chemical properties of quinine and its salts, with special reference to their solubility and to the methods used in dispensing them.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Second Examination
(Part II)

Wednesday, December 15, 1915, 10–12

PHARMACY

[*Not more than* FOUR *questions to be answered*]

1. Give the origin and active principles of the following drugs :—filix mas, digitalis, jaborandi, copaiba, coca, ipecacuanha.

2. What is the composition of the following preparations :—

Mistura Sennae Co. ;
Pulvis Jalapae Co. ;
Confectio Sulphuris ;
Pilula Ferri ;
Tinctura Camphorae Co. ?

3. Describe shortly the preparations of Belladonna.

4. Mention the strength and dose of each of the following preparations :—aqua laurocerasi, tinctura opii, tinctura nucis vomicae, liquor arsenicalis,pulvis opii co., liquor hydrargyri perchloridi.

5. Write a short account of the following terms :—patent medicine, incompatibility, stearoptene, glucoside, pharmacy, tolerance.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

Monday, June 24, 1912, 10–1

PATHOLOGY AND BACTERIOLOGY

[*Not more than* FIVE *questions to be answered, of which Nos.* 3 *and* 4 *must be two*]

1. What do you understand by auto-intoxication? Give an account of the experimental evidence relating to the subject.

2. Describe in detail the histological changes found in the cerebrum in general paralysis of the insane.

3. What do you understand by *toxin* and *antitoxin*? How do bacterial toxins differ one from the other and how is the production of antitoxins thereby affected?

4. A dead body is found in the street and you are called to make a post-mortem examination. You can obtain no further history of the case. Give an account of the methods you would pursue and the features to which you would pay special attention in making the autopsy.

5. What is fatty degeneration? Give an account of some of the various hypotheses put forward in explaining the fatty changes to which this term is applied by pathologists.

6. How does tuberculosis affect the genito-urinary tract? At what points may the tract be invaded? How does extension take place? Describe the more important lesions met with in different sites.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

Thursday, December 12, 1912, 10–1

PATHOLOGY AND BACTERIOLOGY

[*Not more than* FIVE *questions to be answered*
Questions *1 *and* *4 *must be attempted*]

*1. Describe the changes that may be met with in the heart removed from a case in which death has resulted from 'heart failure' following a long period of 'heavy drinking'.

2. Write an account of the naked-eye and microscopical characters of—

(*a*) the blood (taken before death),
(*b*) the bone marrow (taken after death),
(*c*) the spleen (,, ,, ,,),

from a case of myelogenous leukaemia.

3. Give a description of the naked-eye and microscopical appearances present at different levels in the spinal cord and in the medulla oblongata taken from a case of long-standing locomotor ataxia (tabes dorsalis).

*4. Subcutaneous injection of 1 c.c. of Leeds tap water produces no bad effects in guinea pigs; subcutaneous injection of 1 c.c. of Leeds milk often causes death. Give detailed reasons for this difference.

5. Which are the 'ductless glands'? Describe the pathological effects resulting from the atrophy and hypertrophy respectively of one of them.

6. Mention the chief protozoal diseases of man and give an account of the organism responsible for one of them.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

Friday, June 20, 1913, 10–1

PATHOLOGY AND BACTERIOLOGY

[*Not more than* FIVE *questions to be answered. No.* *6 *must be attempted*]

1. Describe the chemical and morphological composition of the urine in the chief varieties of inflammatory lesions of the kidney and explain the reasons for the differences.

2. Describe the procedures by which you would isolate and identify the specific pathogenetic organism from a living case of enterica.

3. Give an account of the main conditions known to affect the processes of growth and of repair.

4. Describe the various types of epitheliomata. What do we know concerning the aetiology of these tumours?

5. What do you mean when you use the term 'deviation of complement'? Give a demonstrative example.

*6. What changes may occur in the myocardium as the result of—

(*a*) typhoid fever;
(*b*) diphtheria;
(*c*) syphilis?

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

Saturday, December 13, 1913, 10–1

PATHOLOGY AND BACTERIOLOGY

[*Not more than* FIVE *questions to be answered. Nos.* *1 *and* *4 *must be attempted*]

*1. Discuss the causes and effects of fever.

2. What characteristics do you associate with malignancy in tumours and in what ways do such tumours endanger the life of the individual affected?

3. What information may be expected from the examination of the cerebro-spinal fluid in disease of the brain or meninges?

*4. The deposit from a specimen of urine contains bacilli which are stained red by the Ziehl-Nielsen method. How would you identify the organisms with certainty?

5. Contrast the local results following injury with loss of substance in (*a*) the skin, (*b*) the liver and (*c*) the brain.

6. What ill effects may follow the administration of a single and of repeated doses of an antitoxic serum? Describe how similar conditions may be experimentally produced.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

Thursday, June 25, 1914, 10–1

PATHOLOGY AND BACTERIOLOGY

[*Not more than* FIVE *questions to be answered. Nos.* *1 *and* *4 *must be attempted*]

*1. Give some account of the pathology of albuminuria.

2. Define an aneurism, and state the causes, varieties, and, in general terms, the results of the condition.

3. Discuss the aetiology and pathology of acute poliomyelitis.

*4. Describe the chief pathological features to be seen at the autopsy of a case of long-standing pulmonary tuberculosis.

5. Distinguish between pyrexia and fever. Describe the histological changes occurring in the various tissues as the result of persistent fever.

6. How would you count the numbers of the red and white corpuscles in the blood? To what pathological changes do variations from the normal point?

[The consideration of abnormal *forms* is *not* required.]

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

(Part I)

Saturday, December 12, 1914, 10–1

PATHOLOGY AND BACTERIOLOGY

[*Not more than* FIVE *questions to be answered. Nos.* *1 *and* *4 *must be attempted*]

*1. Give some account of the phenomenon of complement deviation and of its application in the practice of medicine.

2. Discuss the pathology of fatty degeneration.

3. What are the more important abnormal appearances one is likely to encounter in a post-mortem examination of a case of malignant endocarditis?

*4. What is the main distinction between affections of the grey and of the white matter in the spinal cord? Give an account of the changes seen in the spinal cord in disseminated sclerosis.

5. What is the aetiology of (*a*) tetanus and (*b*) tetany? Describe the cause of the former in detail and how its effects may be neutralized.

6. Describe and explain the causes of the macroscopic and microscopic appearances of the liver resulting from long-standing chronic congestion.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

FORENSIC MEDICINE

Saturday, June 22, 1912, 10–12

[*Not more than* FIVE *questions to be answered*]

1. Describe a case of poisoning by carbolic acid, with details of treatment.

2. Enumerate the various tests for blood and describe as fully as you can the biochemical test for human blood.

3. What is infanticide? What is the difference between it and ordinary murder?

4. What are the best means of determining how long a body has been dead, (*a*) from 1 to 24 hours, (*b*) for longer periods.

5. What are the causes of death in hanging? How would you decide whether a case of death from hanging were accidental, suicidal or homicidal?

6. What is rigor mortis? What is its importance?

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.

Final Examination

Monday, December 16, 1912, 10–12

FORENSIC MEDICINE

[*Not more than* THREE *questions to be answered*]

1. What is the sequence of events in the examination of a sworn witness and how do the various steps differ in their details?

2. Discuss the possible causes of profound unconsciousness.

3. What injuries found upon the dead body of a newborn child may be the result of non-instrumental labour or of accident at birth and how would you distinguish them from injuries inflicted with intent to kill?

4. Describe the symptoms of a case of poisoning with phosphorus. How and for what purpose may the poison have been taken? Enumerate the more important post-mortem appearances.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

(Part II)

Monday, December 14, 1914, 10–12

FORENSIC MEDICINE

[*Not more than* THREE *questions to be answered*]

1. Describe the symptoms and treatment of poisoning by cocaine.

2. A woman contracts a condition of the eye associated with hyperaemia of the vessels; later on she develops symptoms of diabetes insipidus (great thirst and polyuria). Discuss the case from a toxicological standpoint.

3. Describe some of the more common *mechanical* means by which criminal abortion is induced. From what clinical and post-mortem evidence would you conclude that such methods had been employed?

4. A boy complained, on his return from morning school, that he had that day been struck on the head with a ruler by a master. He returned to school in the afternoon, but on the following day cerebral symptoms developed and the lad died comatose at the end of a week. What may you find on post-mortem examination? Discuss the case with special reference to the alleged assault.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.

Final Examination

(Part II)

Wednesday, December 15, 1915, 2–4

FORENSIC MEDICINE

[*Not more than* THREE *questions to be answered*]

1. Discuss the forensic aspects of injuries to the head (exclusive of those to the face).

2. You are asked by the police to examine a suit of clothes for traces of blood. How would you conduct the search? Describe the tests which you would apply to suspicious stains, and explain the principles underlying the biological methods by which the origin of blood may be determined.

3. A workman is said to have received an injury to the spine, followed by complaint of loss of power in the legs. How would you arrive at the conclusion that the condition is functional and not due to gross lesion of the cord?

4. Describe the symptoms and treatment of poisoning by opium.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination
(Part II)

Thursday, June 24, 1915, 2–4

FORENSIC MEDICINE

[*Not more than* THREE *questions to be answered*]

1. Describe fully the conditions (*a*) rigor mortis, (*b*) cadaveric spasm.

2. How may the form and site of a fracture of the skull help you to determine how the injury was caused? Give examples.

3. You are asked to examine the body of a man found dead with a bullet-wound of the head, and a revolver in his hand. What problems does such a case present, and how may the examination of the clothes, and of the body and its surroundings help to solve them?

4. Describe the symptoms of poisoning by carbon monoxide, carbon dioxide and chlorine. How is carbon monoxide detected in the blood?

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

Monday, December 15, 1913, 2–4

PUBLIC HEALTH

[*Not more than* FOUR *questions to be answered*]

1. Compare the composition as to Caseinogen, Lactalbumin, Sugar, Fat, and Salts, of Human and Cow's milk: and state what are the advantages to the baby of breast-feeding.

2. State the principal causes of death amongst children in the first month of life and compare them with those from the ninth to the twelfth month.

3. Describe the anatomy of the gullet, crop, proventriculus and alimentary canal of the house-fly. State its principal breeding grounds and in what ways it makes itself objectionable.

4. At what age-periods do consumption, enteric fever, whooping cough, scarlet fever, cancer, Bright's disease, cause their greatest mortality? Indicate causes of selection.

5. Describe how the bath, lavatory and water-closet wastes should be dealt with in an artisan's cottage.

6. The Registrar-General estimates the population of Leeds at 447,297. In the first thirteen weeks of the present year 2,064 deaths were registered. What was the death-rate?

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

Tuesday, June 23, 1914, 2–4

PUBLIC HEALTH

[*Not more than* FOUR *questions to be answered*]

1. Comment on the death-rate in town and country districts generally. Mention any diseases in which the death-rate is higher in the one than the other, and state the causes of the difference.

2. In the 53 weeks ended January 3, 1914, 10,947 births were registered in Leeds and 7,289 deaths; of the latter, 1,487 were in children under one year of age. The population of the town was estimated as 457,295. What were the birth-rate and the death-rate per 1,000 per annum, and what was the infant mortality? Show the calculation in each case.

4. What is the usual age of death from consumption, and what causes contribute to the incidence of the disease and its mortality?

4. Describe the arrangements which should be made for dealing with house refuse in a large town.

5. What do you understand by 'return cases' in Scarlet Fever? Discuss their probable causes, and the means that should be adopted for their prevention.

6. Under what legal powers can a patient suffering from infectious disease (*a*) be removed to hospital, and (*b*) be detained there, if considered necessary?

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

(Part II)

Monday, December 14, 1914, 2–4

PUBLIC HEALTH

[*Not more than* FOUR *questions to be answered, of which No.* *3 *must be one*]

1. Describe briefly the usual drainage-system of a modern villa residence. Discuss the possible relationship between sewer or drain gases and disease.

2. Name the notifiable infectious diseases, and state what inquiries should be made in investigating a case of small-pox.

*3. In a town of 459,260 inhabitants there have been during the year 179 cases of enteric fever, of which twenty-six terminated fatally. Show how to calculate (*a*) the attack-rate, (*b*) the death-rate, (*c*) the case mortality from enteric fever.

4. Mention any diseases that are liable to arise in connexion with military operations in European countries. What precautionary measures for their prevention can you suggest?

5. Discuss the special dangers to health incurred by workers in the following trades:—(*a*) file-cutters, (*b*) wool-sorters, (*c*) knife-grinders, (*d*) brass-founders, (*e*) coal-miners.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination
(Part II)

Tuesday, June 22, 1915, 2–4

PUBLIC HEALTH

[*Not more than* FOUR *questions to be attempted, of which No.* *6 *must be one*]

1. Describe the various sources from which water-supplies are obtained, discussing the advantages and disadvantages of each.

2. Mention the diseases which may be caused by contaminated food. How is contamination of food likely to occur?

3. What do you know of the epidemiology of cerebro-spinal meningitis? How would you deal with an outbreak of this disease?

4. What factors appear to influence the death-rate from pulmonary tuberculosis?

5. Give a concise description of the methods that you would advise for dealing with the household and trade refuse of a large town.

*6. Discuss the various factors concerned in bringing about a high death-rate among infants (*a*) during the first few weeks, and (*b*) during the first year of life.

THE UNIVERSITY OF LEEDS

Diploma in Public Health

Thursday, December 12, 1912, 2–5

AETIOLOGY OF DISEASE

[*Not more than* FOUR *questions to be answered*]

1. In a town of 50,000 inhabitants there is an epidemic of scarlatina. The epidemic is more extensive than it has been for the last 6 months but during the last twelve months there have been several minor outbreaks. What steps would you take to eradicate the disease ?

2. Give the history of any outbreak of acute anterior poliomyelitis of which you have read or had experience. What is known concerning the pathogenesis of this disease ?

3. Give an account of the life history of the B. anthracis placed under conditions in which the Medical Officer of Health has to study this organism and point out the special importance of a knowledge of certain phases in this life history in following up and checking the outbreaks of anthrax amongst cattle or sheep and in the human subject.

4. Describe any accepted method of standardizing disinfectants and point out the failings common to all methods.

5. Explain fully why every individual exposed to infection, e. g. of scarlet fever, is not attacked by the disease.

THE UNIVERSITY OF LEEDS

Diploma in Public Health

Thursday, December 12, 1912, 10–12

CHEMISTRY AND PHYSICS AS APPLIED TO PUBLIC HEALTH

[*Not more than* FOUR *questions to be answered. Question* 3 *must be attempted*]

1. Six litres of air measured at 17° and 740 mm. require 5 c.c. of baryta solution for precipitation of the carbon dioxide present. 1 c.c. of baryta solution = 1 c.c. carbon dioxide gas at N.T.P. Calculate the amount of CO_2 present in parts per 10,000. How would you prepare a standard solution of baryta of the above strength (Ba = 137; O = 16; C = 12; baryta crystals = $Ba(OH)_2 . 8H_2O$; oxalic acid crystals = $C_2H_2O_4 . 2H_2O$)?

2. Describe in detail one process for determining fat in milk. A sample of milk contains 2·75 per cent. of fat. What percentage of adulteration does this indicate in accordance with the Board of Agriculture standard? What other determinations would you consider desirable in order to confirm adulteration?

3. Describe in detail the manner in which the following weather observations are made. What do they indicate?

		Nov. 11	Nov. 12
Barometer		29·15	28·9
Thermometer	dry bulb	39·7	38·8
	wet bulb	32·5	34·1
Humidity		51·0	55·0
Temperature, Max. in shade		44·0	
,, Min. ,,		34·4	

4. In a room measuring 20 feet square and 9 feet high a jet burned at the rate of 3 cb.ft. of coal gas per hour. The coal-gas contained 40 per cent. hydrogen, 40 per cent. methane, 5 per cent. carbon monoxide, 15 per cent. nitrogen &c. Supposing the products of combustion to be retained in the room, what increase in the volume of carbon dioxide in parts per 10,000 would have taken place at the end of two hours?

5. Describe alternative methods of producing chlorine gas for disinfecting purposes. Explain its action as a disinfectant and deodorant.

THE UNIVERSITY OF LEEDS

Diploma in Public Health

Monday, June 24, 1912, 2–5

AETIOLOGY OF DISEASE

[*Not more than* FOUR *questions to be answered, of which No. 2 must be one*]

1. What is 'ferro-silicon'? Describe the symptoms and pathological conditions attributable to its presence on board ship. How may these be prevented?

2. What is the normal bacteriological composition of drinking-water? What criteria would you adopt in deciding on the potability of a water from its bacteriological analysis?

3. Give a brief account of the aetiology of meat poisoning and how you would trace any epidemic of the disease to its source.

4. A farm is suspected of being the centre of tuberculous infection. What steps would you take, acting with the veterinary surgeon, to help you to decide whether the cattle, swine, and horses are suffering from tuberculosis? In checking the results of any post-mortem examinations, what pathological conditions other than tuberculosis would you keep in mind?

5. What do you understand by the term 'typhoid carrier'? What is the importance of the carriers? In connexion with what other diseases are human and animal carriers described?

6. How would you determine the bacterial contents of the air? What is the value of any determination that you may make?

THE UNIVERSITY OF LEEDS

Diploma in Public Health

Tuesday, June 25, 1912, 2–5

SANITARY LAW AND ADMINISTRATION

[*Not more than* FOUR *questions to be answered*]

1. Enumerate the several classes of nuisances that can be dealt with summarily under the provisions of the Public Health Acts outside London.

2. Give the steps by which you would enforce (*a*) the disuse of a polluted water supply, (*b*) the frequent cleansing of a stable manure pit, (*c*) the closure of an unhealthy dwelling, (*d*) the removal of a case of diphtheria to hospital.

Give all your proceedings and state under what statutory powers.

3. The population of Leeds at the 1911 Census was found to be less than had been estimated. The deaths in the 52 weeks of 1911 were, inclusive of outsiders dying within the city, 7,934. The Registrar General's estimate of the Leeds population to the middle of 1911 before the Census had been 498,027; after the Census he altered it to 445,983. What was the death-rate on the second estimate and what percentage correction would require to be made on the rate estimated on the earlier one? Show calculation.

4. What steps would you take to reduce the dangers from flies?

5. Under what legal powers can a patient suffering from infectious disease (*a*) be removed to hospital, and (*b*) be detained there, if considered necessary?

THE UNIVERSITY OF LEEDS

Diploma in Public Health

Tuesday, June 25, 1912, 10–1

ENGINEERING AS APPLIED TO PUBLIC HEALTH

[*Not more than* FOUR *questions to be answered*]

1. Describe a steam disinfector and explain how you would house it.

2. Sketch generally the points you would seek to meet in providing a Sanatorium for a hundred phthisis patients.

3. What is the comparative efficiency for ventilating purposes of one six-inch and two four-inch pipes of the same height? What other conditions besides height and diameter would affect the efficiency?

4. Describe briefly a hydraulic ram for raising water to a house. Give, generally, storage and other requirements. Under what circumstances would you prefer an American Windmill?

5. How would you proceed to determine the amount of effluent from a sewage farm?

THE UNIVERSITY OF LEEDS

Diploma in Public Health

Friday, June 20, 1913, 10–1

ENGINEERING AS APPLIED TO PUBLIC HEALTH

[*Not more than* FOUR *questions to be answered*]

1. What is meant by head of water, dry weather flow of sewage, saturated steam, steam under pressure, superheated steam, self-cleansing drain, septic tank, broad irrigation?

2. Describe a Winsor trap, a Buchan trap, and state in what cases you would advise either.

3. Mention the chief characteristics of water obtained from the millstone grit, granite hills, schists, Dolomitic limestone, mountain limestone, upper greensand, chalk.

How would you treat water derived from surface of moorland and from wells in the chalk before distributing it to a town?

4. Describe *one* of the following:—

(*a*) steam disinfecting station,

(*b*) filter beds for water-supply,

(*c*) refuse destructor,

(*d*) sewage works by chemical precipitative methods,

(*e*) sewage works by bacteriological treatment.

5. The water-supply of a town is obtained from a deep well in the chalk situated within about three-quarters of a mile of a site on which is treated the sewage from a large institution. In view of possible contamination of the well-water what steps would you take to determine the point?

6. What are the advantages and disadvantages respectively of the methods employed for artificial ventilation?

THE UNIVERSITY OF LEEDS

Diploma in Public Health

Friday, June 20, 1913, 2–5

SANITARY LAW AND ADMINISTRATION

[*Not more than* FOUR *questions to be answered*]

1. Diphtheria has become prevalent in a district of your town. How would you proceed to ascertain the cause of its spread?

2. Compare the notifications obtained under the Infectious Diseases (Notification) Act, Notification of Births Act, and the Local Government Board Tuberculosis Order of 1912. How would you deal with the facts supplied you?

3. Explain the Tuberculosis Order of the Board of Agriculture of 1913. To what extent does it recognize the tuberculin test?

4. Give an epitome of the Housing and Town Planning Act, 1909.

5. Discuss the etiology and prevention of post-scarlatinal diphtheria.

6. A river is being polluted by the discharge into it of crude sewage from a manufacturing town. What steps can be taken to improve matters in this respect?

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.

Final Examination

(Part III)

Monday, December 13, 1915, 10–1

MEDICINE. I

[*Not more than* FOUR *questions to be answered. Question* *1 *must be attempted and the answer written in a separate book*]

*1. Give an account of the symptomatology and diagnosis of general paralysis of the insane.

2. Describe the symptoms and physical signs of acute pericarditis. Under what conditions is it likely to arise?

3. Describe the symptoms which may be noted in various stages of cirrhosis of the liver. How may they be treated ?

4. A patient complains of recurrent attacks of severe pain starting in the left lumbar region. Describe briefly the various enquiries and examinations you would make to determine the cause.

5. Describe the symptoms of dysentery, and discuss the complications and the treatment.

EXTRACT FROM REGULATIONS:

In the paper on Medicine, passages of French and German relating to Medicine will be included for translation into English. The marks obtained for such translation will be taken into account in determining the award of Honours, but not in determining the passing or rejecting of any candidate.

Passage for Translation.

Les néoplasmes intracrâniens de nature diverse, sarcomes, gliomes, exostoses, gommes syphilitiques, etc., comprimant la substance grise, amènent souvent un état vertigineux habituel avec exacerbations, tantôt en gênant

la circulation artérielle (tumeurs du voisinage du sinus caverneux comprimant le tronc de la carotide interne, ou des fosses sphénoïdales comprimant la sylvienne, ou de l'apophyse basilaire comprimant le tronc de la vertébrale). C'est alors du vertige par ischémie souvent continu ou ne se manifestant parfois que par accès sous l'influence de causes occasionnelles, émotions, excès, causes de contraction vasomotrice surajoutée, ou en raison seulement de cette propriété des éléments nerveux de ne réagir que par intermittence. D'autres fois, ces tumeurs gênent simultanément ou isolément la circulation veineuse (compression des sinus, surtout par celles de la convexité), d'où congestion passive et état vertigineux plus continu que dans le cas précédent.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination
(Part III)

Monday, December 13, 1915, 2–5

MEDICINE. II

[*Not more than* FOUR *questions to be answered. Question* *1 *must be attempted*]

*1. Give the symptoms, course and treatment of whooping cough. What complications and sequelae may be met with?

2. Describe a case of migraine, and discuss its diagnostic features. How would you treat it?

3. Describe the premonitory symptoms of measles, scarlet fever, typhoid fever and smallpox, respectively.

4. When the following drugs are being employed medicinally :—

(*a*) Liquor Arsenicalis;

(*b*) Tinctura Belladonnae;

(*c*) Tinctura Nucis Vomicae;

(*d*) Liquor Hydrargyri Perchloridi;

what symptoms would lead you to reduce the dose?

5. Give an account of the course of a case of acute eczema. Mention the chief causes, and discuss in detail the treatment.

EXTRACT FROM REGULATIONS:

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Passage for Translation.

Mit reichem Sinn und Verständnis für alles Praktische begabt, voll Empfänglichkeit für alles Neue, wenn es auch aus dem Auslande stammte, durch nüchterne Denkrichtung vor Ueberstürzungen bewahrt, übernahmen die englischen Aerzte nicht nur die Methode und letzten Ergebnisse der Pariser Schule, sondern entwickelten die schon ein Jahrhundert von Einzelnen erfolgreich begonnene Kasuistik zur anatomisch-klinischen Forschung und bildeten die besonders durch J. Forbes übermittelte physikalische Diagnostik selbständig weiter. Diese rege, echt wissenschaftliche Tätigkeit, deren Ergebnisse durch die wachsende Publizistik rasch verbreitet wurden, konzentrierte sich namentlich in zwei Brennpunkten des Fortschrittes, in der Schule zu Edinburg und in der Schule zu Dublin.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination
(Part III)

Monday, June 21, 1915, 10–1

MEDICINE. I

[*Not more than* FOUR *questions to be answered. Question* *1 *must be attempted, and must be answered in a separate book*]

*1. Describe the symptomatology and pathology of senile dementia.

2. What symptoms and signs may result from an aneurysm of the transverse part of the arch of the aorta?

3. Describe and explain the usual modes of death in :—

(*a*) Diabetes in a young adult.

(*b*) Granular kidney.

Describe briefly what treatment you would adopt in the presence of symptoms indicating danger.

4. Describe the symptoms and treatment of hepatic colic.

5. Describe the lesions found in the skin and mucous membranes in the secondary stage of syphilis; state how they may be distinguished from other conditions which they resemble.

EXTRACT FROM REGULATIONS:

In the paper on Medicine, passages of French and German relating to Medicine will be included for translation into English. The marks obtained for such translation will be taken into account in determining the award of Honours, but not in determining the passing or rejecting of any Candidate.

Passage for Translation.

Ces pneumonies traumatiques bénignes se présentent sous l'aspect suivant que nous avons observé plusieurs fois avec des variations peu importantes.

Un individu a reçu une contusion sur la poitrine.

En l'examinant quatre ou cinq jours, on constate, au niveau du point contusionné, un souffle peu étendu et peu intense, entouré d'une zone où se font entendre quelques râles crépitants. Le blessé n'a pas eu de frisson ; il a peu de fièvre, quelquefois pas du tout ; il a craché un peu de sang après l'accident, et il a continué à expectorer tous les jours quelques crachats sanglants, mais quand on peut voir ceux-ci ils n'ont pas la couleur rouillée. Le point de côté, s'il a existé, se confond avec la douleur de la contusion thoracique. Le blessé ne s'alite pas, et quand on le revoit une dizaine de jours après l'accident on ne trouve plus que quelques râles humides limités à la même région du poumon.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination
(Part III)

Monday, June 21, 1915, 2–5

MEDICINE. II

[*Not more than* FOUR *questions to be answered. Question* *1 *must be attempted*]

*1. Give an account of infantile paralysis, including the symptoms, pathology and treatment.

2. Describe the symptoms and physical signs of acute pleuritic effusion. Enumerate its causes.

3. Describe and explain the modifications of the pulse commonly observed in the following conditions :—

(*a*) jaundice ;

(*b*) aortic regurgitation ;

(*c*) mitral disease ;

(*d*) exophthalmic goitre.

4. During an epidemic of typhoid fever what measures should be adopted to check the spread of the infection ?

5. Describe briefly the symptoms of epidemic cerebro-spinal meningitis and state upon what observed facts you would base your diagnosis.

EXTRACT FROM REGULATIONS :

In the paper on **Medicine**, *passages of French and German relating to medicine will be included for translation into English. The marks obtained for such translation will be taken into account in determining the award of Honours, but not in determining the passing or rejection of any candidate.*

Passage for Translation.

Sydenham, der mit seinen auf hippokratischen Prinzipien beruhenden Grundanschauungen in der Pathologie und Therapie den Namen eines medizinischen

Reformators erworben hat, eröffnete auch in der Epidemienlehre eine geschichtlich bedeutsame Epoche. Sein Geist durchwehte das ganze 18. Jahrhundert und das von ihm proklamierte Kausalverhältnis von Seuche und Krankheitskonstitution wurde zum Gemeingut ärztlicher Generationen. Die epidemiologischen Lehren des grossen englischen Arztes mit ihrer mystischen Krankheitsätiologie wurden gläubig aufgenommen und befriedigten gerade, weil sie von einem Naturgeheimnis ihren Ausgang ableiteten, den geistigen Geschmack und die Weltanschauung der Zeitgenossen.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.

Final Examination

Monday, June 22, 1914, 2–5

MEDICINE. II

[*Not more than* FOUR *questions to be answered. Question* 1* *must be attempted, and the answer written in a separate book*]

1*. Describe the symptoms and signs of rickets as occurring in a child of about three years of age. Discuss the causation and treatment.

2. How would you determine the significance and prognostic importance of albuminuria observed in a young adult?

3. What complications may arise in the course of rheumatic fever? Describe in detail their signs and symptoms, and indicate the treatment you would adopt.

4. Give the symptoms, signs, and differential diagnosis of aneurism of the transverse part of the arch of the aorta. Discuss the treatment.

5. Describe the symptoms of a case of measles during the first week. During an epidemic of measles what premonitory signs call for special attention and examination?

EXTRACT FROM REGULATIONS:

In the paper on Medicine, passages of French and German relating to medicine will be included for translation into English. The marks obtained for such translation will be taken into account in determining the award of Honours, but not in determining the passing or rejection of any candidate.

Passage for Translation.

Reste une dernière question. Le système nerveux peut-il produire des inflammations? Le plus souvent,

il ne fait que favoriser le développement des germes pathogènes ; les escarres d'origine nerveuse, le mal perforant doivent s'expliquer ainsi ; il en est probablement de même pour les ulcérations cornéennes consécutives à la section du trijumeau. Mais où son rôle devient plus complexe, c'est dans la production du zona. Quelle que soit la nature de la maladie, il est très difficile de dire actuellement par quel mécanisme exact le système nerveux préside à la formation des vésicules et de la plaque inflammatoire qui les supporte.

L'embarras n'est pas moins considérable quand il s'agit d'expliquer l'ophtalmie sympathique. On a dû abandonner l'idée, fort simple, d'un cheminement de microbes pathogènes par le nerf optique et le chiasma. Il a fallu revenir à l'ancienne théorie de l'action réflexe ayant pour point de départ les procès ciliaires et admettre une vasoconstriction, probablement intermittente, des vaisseaux symétriques de l'œil sain. Cette ischémie réflexe favoriserait la localisation ultérieure des germes morbides qu'une cause occasionnelle ferait pénétrer dans l'organisme. Qu'on adopte ou non cette conception, l'histoire de l'ophtalmie sympathique est le plus bel exemple qu'on puisse citer d'un trouble trophique par réaction nerveuse.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination
(Part III)

Thursday, December 10, 1914, 2–5

MEDICINE. II

[*Not more than* FOUR *questions to be answered. Question* *1 *must be attempted and the answer written in a separate book*]

*1. What are the chief causes of wasting in a child under two years of age? Discuss the diagnosis and treatment.

2. Describe the physical signs and symptoms of pneumothorax, and discuss their diagnostic significance.

3. A patient complains of undue frequency of micturition. State how you would determine the cause.

4. What symptoms would lead you to suspect the presence of a gastric ulcer? Describe the steps you would take in the endeavour to form a diagnosis.

5. Describe the symptoms and signs of a case of disseminated sclerosis. Mention the chief points in its differential diagnosis.

EXTRACT FROM REGULATIONS:

In the paper on Medicine, passages of French and German relating to Medicine will be included for translation into English. The marks obtained for such translation will be taken into account in determining the award of Honours, but not in determining the passing or rejection of any candidate.

Passage for Translation.

Le glucose est à peu près le seul sucre que l'on utilise en solution hypertonique; son pouvoir diurétique est plus grand que celui des autres sucres. Le coefficient

diurétique du glucose est 2,8, celui du saccharose seulement 2 ; sa pénétration lente fait qu'il se transforme au fur et à mesure en glycogène pour se fixer sur les cellules hépatiques et les muscles (Enriquez insiste sur la localisation myocardiaque).

Dans ces conditions, le taux de la glycémie ne dépasse que rarement le chiffre de 3 pour 1000, chiffre fixé par Claude Bernard comme le seuil au-delà duquel le sucre apparaît dans l'urine.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

Thursday, June 19, 1913, 10–1

MEDICINE. I

[*Not more than* FOUR *questions to be answered. Question* 1* *must be attempted, and the answer written in a separate book*]

1*. Compare the symptoms presented by (*a*) a case of delirium tremens, and (*b*) one of acute delirious mania.

2. Describe a typical case of Graves's disease, detailing and explaining the mode of action of the more usual methods of treatment.

3. Describe the symptoms, course and treatment of ulcerative endocarditis.

4. What are the physical signs produced by a large renal tumour on the left side? How would you determine the character of the enlargement?

5. Enumerate the causes of hemiplegia, and describe accurately the common manifestations of the condition.

EXTRACT FROM REGULATIONS:

In the paper on Medicine, passages of French and German relating to Medicine will be included for translation into English. The marks obtained for such translation will be taken into account in determining the award of Honours, but not in determining the passing or rejecting of any Candidate.

Passage for Translation.

Il n'existe pas, à l'heure actuelle, de thérapeutique antituberculeuse dont la pratique ait démontré la spécificité. Les traitements par la tuberculine et par les sérums sont basés sur des principes analogues à ceux des médications spécifiques les plus efficaces: mais leur

action, qui est indéniable, ne peut être comparée à l'influence si nettement curative de ces dernières. On ne saurait prétendre, en effet, qu'ils guérissent à coup sûr. Grâce à eux, on peut aider l'organisme dans sa lutte contre le bacille de Koch et contre ses toxines, mais on ne détruit pas le microbe, on ne neutralise pas ses poisons. Ils constituent cependant une des meilleures armes que nous possédions aujourd'hui pour lutter contre la tuberculose. La tuberculine et les sérums antituberculeux sont des agents thérapeutiques dont le maniement est très délicat. Leur administration intempestive ou mal réglée peut amener des désastres.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

Thursday, December 11, 1913, 2–5

MEDICINE. II

[*Not more than* FOUR *questions to be answered.*
Question 1* *must be attempted*]

*1. Give detailed instructions for the management and treatment of chronic constipation occurring in a child six years old.

2. What disturbances of vision may arise in the course of chronic Bright's disease? How are they caused? What assistance in the diagnosis may be obtained from ophthalmoscopic examination?

3. What symptoms may be associated with jaundice resulting from gall-stones? Contrast these with the symptoms of jaundice due to malignant disease.

4. In a patient with hemiplegia how would you ascertain the site and the nature of the lesion?

5. Mention the chief causes of effusion of fluid into the peritoneal cavity. Discuss their differential diagnosis and state how the condition should be dealt with in each case.

EXTRACT FROM REGULATIONS:

In the paper on Medicine, passages of French and German relating to Medicine will be included for translation into English. The marks obtained for such translation will be taken into account in determining the award of Honours, but not in determining the passing or rejecting of any Candidate.

Passage for Translation.

La distension de l'estomac et de l'intestin agit mécaniquement sur les parties voisines, surtout sur les organes thoraciques, et provoque la dyspnée, les palpitations, la tachycardie, l'arythmie cardiaque. Ces accidents n'ont

rien de bien spécial et s'expliquent facilement. Ce qui est plus important à envisager, c'est le danger qui résulte, pour le foie et le pancréas, de l'ouverture, dans le duodénum, de leurs conduits excréteurs. Voilà une route toute tracée, par laquelle les agents animés pourront remonter de l'intestin vers les deux glandes abdominales. A l'état normal, les microbes semblent incapables de pénétrer dans les conduits; les liquides qui s'écoulent suffisent à les balayer. Mais, si les sécrétions sont diminuées ou taries, ou si les bactéries, jusque-là inoffensives, arrivent à s'exalter, il n'en est plus de même. L'ascension des germes infectieux par le canal cholédoque ou le canal de Wirsung, notamment dans les cas d'entérite, provoquera une variété intéressante d'angiocholite ou de pancréatite infectieuse.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

Thursday, June 19, 1913, 2–5

MEDICINE. II

[*Not more than* FOUR *questions to be answered.*
Question 1* *must be attempted*]

*1. How would you determine the cause of a series of convulsions in an infant aged eight months? What harm may result from their repetition and how can they be controlled?

2. By what physical signs would you detect the presence of ascites? How would you determine the cause of the condition?

3. What are the chief causes of marked variation from the normal blood-pressure? What drugs have the power of correcting such variations? When may they be used?

4. Discuss the causes, symptoms, distribution and treatment of herpes zoster.

5. Describe a typical case of acute gout and its treatment.

EXTRACT FROM REGULATIONS:

In the paper on Medicine, passages of French and German relating to Medicine will be included for translation into English. The marks obtained for such translation will be taken into account in determining the award of Honours, but not in determining the passing or rejection of any Candidate.

Passage for Translation.

Die Autopsie ergab nun in beiden Fällen als unerwarteten Nebenbefund einen ausgesprochenen Status thymolymphaticus. Im zweiten Falle ging das Gewicht der Thymus freilich nur wenig über das Normalmass hinaus. Dafür war aber die Hyperplasie des lympha-

tischen Apparates sehr stark ausgeprägt, und das Herz wies die Charaktere des Thymusherzens sehr deutlich auf. Der Obduzent, Prof. Schridde, lehnte einen Zusammenhang der linksseitigen Herzhypertrophie mit den kleinen corticalen Schrumpfungsherden entschieden ab und erklärte das Herz speziell auch mit Rücksicht auf die Endocardverdickung an der Ausflussbahn der Aorta für ein typisches Thymusherz.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

Monday, June 24, 1912, 10–1

MEDICINE. I

[*Not more than* FOUR *questions to be answered. Question* 1* *must be attempted and the answer written in a separate book*]

1*. Give an account of the symptomatology of simple acute mania. What is the prognosis and in what respect would this be influenced by the concurrent existence of a state of confusion?

2. Discuss the etiology of emphysema of the lungs and describe the post-mortem appearances found in these organs in a patient dying with this condition. Give an account of the physical signs met with during life.

3. Describe a typical case of chorea in a child of 12 years of age and give in detail the various methods of treatment that might be adopted.

4. What is the pathology of sciatica? Describe the symptoms and differential diagnosis of the disease. What treatment would you adopt in a persistent case?

5. On what points would you rely to distinguish epilepsy from common disorders for which it is likely to be mistaken? Give in detail the treatment of epilepsy in the case of a child 5 years of age.

EXTRACT FROM REGULATIONS:

In the paper on Medicine, passages of French and German relating to Medicine will be included for translation into English. The marks obtained for such translation will be taken into account in determining the award of Honours, but not in determining the passing or rejecting of any Candidate.

Passage for Translation

Au cours de la seconde conférence, dont je parlais tout à l'heure, l'éminent directeur de l'Institut Pasteur de Lille a exposé une conception générale extrêmement

ingénieuse de l'évolution du mal tuberculeux. Une première atteinte conférerait à l'organisme une manière de vaccination, si bien que désormais cet organisme, répugnant extrêmement au bacille, ferait un effort continu, violent, pour le rejeter au dehors ; de là ces formations d'abcès, ces suppurations osseuses, articulaires, pulmonaires, tâchant à éliminer énergiquement le bacille et les amas leucocytaires qui, vainement, ont essayé de le digérer. Si bien que le phtisique se cachectise et meurt —non point tant d'être habité par le microbe et ses poisons—que des brèches, trous et délabrements, qu'il lui faut faire aux tissus de ses organes pour se libérer de cette présence intolérable.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

Monday, June 24, 1912, 2–5

MEDICINE. II

[*Not more than* FOUR *questions to be answered.*
Question 1* *must be attempted*]

1*. How would you distinguish between the common forms of cerebral meningitis in an infant? What modifications of treatment are called for in the several forms?

2. Explain the chief causes of irregularity of the heart's action? How would you estimate the influence of this symptom upon prognosis in any case?

3. What are the distinguishing features of those diseases in which derangement of muscular function appears to be due to a primary lesion of voluntary muscular tissue? Describe in detail any one such disease with which you are familiar.

4. How would you recognize the presence of blood in the faeces: how would you determine its probable source?

5. What are the various conditions which give rise to the symptom of dysphagia? Discuss their differential diagnosis.

EXTRACT FROM REGULATIONS:

In the paper on Medicine, passages of French and German relating to Medicine will be included for translation into English. The marks obtained for such translation will be taken into account in determining the award of Honours, but not in determining the passing or rejection of any Candidate.

Passage for Translation

Bis ein solch langer Gang zu Stande kommt, sind die ersten ausgeschlüpften Jungen bereits ins Stadium

der Geschlechtsreife und Fortpflanzung gediehen. Indem nun diese ihrer Lebensaufgabe nachzukommen bestrebt sind, werden sie wie ihre Vorfahren dieselben Zustände der Haut: Juckempfindung, Knötchen, Bläschen, Pusteln und Gänge erzeugen.—Denkt man sich zu der Vermehrung der Milben noch den Umstand hinzu, dass sich die Thiere theils verlaufen, theils beim Kratzen durch die Fingernägel auf entlegenere Stellen verschleppt werden, so wird man einsehen, dass sich von einem einzigen Punkte aus die Krätze über den ganzen Körper ausbreiten kann.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.

Final Examination

(Part III)

Tuesday, June 22, 1915, 10–1

SURGERY

[*Not more than* FOUR *questions to be answered.* *1 *must be attempted*]

*1. Give the anatomy of the triceps muscle.

Describe the operation for ligature of the brachial artery in the middle of the arm.

2. Mention the common sites of subcutaneous lipoma and the points on which stress should be laid in diagnosis. Describe the operation for its removal.

3. Give an account of the lesions to which the internal semilunar cartilage is liable. How are they brought about, and how is the condition diagnosed?

4. Describe the clinical features and pathology of a strangulated umbilical hernia. How would you treat it? Give details.

5. Mention the structures most liable to be injured in suicidal cut-throat. Indicate the treatment of these injuries and the complications that may ensue.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

Tuesday, June 23, 1914, 10–1

SURGERY

[*Not more than* FOUR *questions to be answered. Question* 1* *must be attempted*]

*1. Given a stab wound in the popliteal space, mention the structures liable to be injured, the symptoms due to such injury, the possible complications, and the treatment.

2. Mention the conditions requiring tracheotomy; give the steps of the operation.

3. A man is brought in to the hospital unconscious. What conditions would it be necessary to differentiate, and how would you diagnose the case?

4. Of villous tumour of the bladder: Describe the clinical features, diagnosis, and treatment.

5. Describe the characteristic features and the complications of fracture in the lower third of the shaft of the femur. How would you treat it?

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

(Part III)

Friday, December 11, 1914, 10–1

SURGERY

[*Not more than* FOUR *questions to be answered.*
Question *1 *must be attempted*]

*1. Give the anatomy of the right sterno-mastoid muscle. Describe the operation you would do in a case of congenital wry-neck.

2. Describe the effects of loss of blood on the blood pressure and circulatory system and the clinical features that attend upon these. What measures would you adopt to tide a patient over a serious loss of blood?

3. What are the later dangers and complications associated with a shell-wound of the orbit?

4. Describe in detail a method of inducing general anaesthesia by means of ether.

5. Discuss the signs, symptoms and treatment of a case of stone in one kidney.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.

Final Examination

Friday, June 20, 1913, 10–1

SURGERY

[*Not more than* FOUR *questions to be answered*
Question 1* *must be attempted*]

*1. Describe the course and relations of the external popliteal nerve, and the distribution of its branches.

What would be the effect of its complete division?

2. Describe the signs and symptoms of a case of strangulated femoral hernia. Give a detailed account of an operation for its relief after six hours' duration.

3. Give the signs, symptoms, pathology, and treatment of a traumatic aneurism of the radial artery on the front of the wrist.

4. Describe the different kinds of fracture met with on the vault of the skull. With what complications may they be associated? Discuss the symptoms.

5. State what you know as to the pathology, signs, symptoms and treatment of a carbuncle.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

Friday, December 13, 1912, 10–1

SURGERY

[*Not more than* FOUR *questions to be answered*
Question *1 *must be attempted*]

*1. Give the origin, course, relations and branches of the deep epigastric artery. Under what surgical conditions is this vessel of importance?

2. Give the causes, diagnosis and treatment of acute intussusception.

3. How do you diagnose and treat a traumatic dislocation of the hip on to the dorsum ilii?

4. What symptoms would be produced by an oxalate of lime calculus, an inch in diameter, in the urinary bladder of a boy? Give a detailed account of the treatment you would adopt in such a case.

5. Describe the future progress of a case in which, in the course of the removal of a growth from the groin, the common femoral artery and vein had unexpectedly to be ligatured.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

Saturday, December 14, 1912, 10–1

OBSTETRICS AND GYNAECOLOGY

[*Not more than* TWO *questions in each section to be answered*]

A

1. What conditions affect the position, rate and audibility of the foetal heart during pregnancy and labour? What conclusions may be drawn from observation of the above points?

2. Describe in detail your method of applying forceps when the head presents at the inlet of a slightly flattened pelvis. What precautions are necessary?

3. A multipara aged thirty seeks advice because of abdominal enlargement and shortness of breath. Her last period was four and a half months ago; the abdominal enlargement was first noticed three months ago and has increased rapidly. On examination the abdomen is found to be greatly distended, dull in front and resonant in the flanks. The upper border of a tumour can be felt just under the ribs, but its lateral margins are ill-defined. A fluid thrill but no ballottement can be made out.

P. V. Softening of the cervix; internal ballottement. The uterus cannot be isolated from the abdominal swelling, and an impulse is communicated to the cervix from the abdominal tumour.

Discuss the diagnosis and treatment.

B

4. What conditions may give rise to an offensive vaginal discharge in a woman aged 54, whose menstrual periods ceased three years previously?

5. How is the uterus maintained in its normal position?

What advice would you give to a patient in whom the cervix uteri projects from the vulva and the sound passes five inches into the uterus?

6. Discuss the causation and treatment of chronic backache in women.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

Saturday, December 13, 1913, 10–1

OBSTETRICS AND GYNAECOLOGY

[*Not more than* TWO *questions in each section to be answered*]

A

1. Describe carefully the management of a normal breech delivery to the end of the second stage. What complications may arise in the above delivery, the pelvis and child being of normal size?

2. In a multipara of 35, who has not menstruated for three months, the uterus is found to be enlarged up to the navel. Enumerate the conditions which might give rise to this state and discuss the differential diagnosis.

3. By what mechanism is the placenta normally expelled from the uterus? What causes lead to its undue retention in the uterus? Discuss the management of the third stage of labour.

B

4. What do you understand by an 'erosion' of the cervix uteri? Discuss its differential diagnosis.

5. What are the causes of retention of urine in women? Describe the treatment.

6. Describe the method of bimanual examination of the pelvis. State what physical signs such an examination would reveal in the following conditions:—

(*a*) Uncomplicated ovarian tumour.

(*b*) Uterus with multiple fibroids.

(*c*) Chronic inversion of the uterus.

(*d*) Retroflexion of uterus.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

Saturday, June 21, 1913, 10–1

OBSTETRICS AND GYNAECOLOGY

[*Not more than* TWO *questions in each Section to be answered*]

A

1. Discuss the symptoms and treatment of 'threatened', 'inevitable', and 'incomplete' abortion respectively. What is meant by 'missed abortion' and what course may it take?

2. Discuss the management of the following case:— The patient is in her first labour; the head is movable above the brim, the os admits two fingers, and the umbilical cord is prolapsing.

3. What are the indications for exploration of the uterine cavity in the first week of the puerperium? Describe exactly your method of carrying out this procedure.

B

4. What varieties of polypi may be found projecting from the cervix uteri? Give the symptoms, diagnosis and treatment of each variety.

5. Describe the position and relations of the vulvo-vaginal gland (Bartholini's) and its duct. What pathological conditions of this gland are commonly met with, and how should they be treated?

6. A patient has behind the cervix uteri a rounded, movable swelling about as large as the normal body of the uterus. To what different conditions may this be due, and how would you make a differential diagnosis?

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

Wednesday, June 24, 1914, 10–1

OBSTETRICS AND GYNAECOLOGY

[*Not more than* TWO *questions in each Section to be answered*]

A

1. How would you diagnose a transverse presentation? Describe in detail any one method of treatment suitable to such a case.

2. Under what conditions would you advise the induction of premature labour in the last two months of pregnancy? Describe in detail the method you would employ.

3. What do you know of the causes, course, symptoms, and treatment of acute peritonitis following labour or abortion?

B

4. Name the commonest forms of enlargement of the corpus uteri in the non-pregnant state, and give the differential diagnosis.

5. What are the objections to the use of vaginal pessaries? Under what circumstances would you employ them? What form would you choose, and what precautions would you consider necessary?

6. Describe carefully the treatment of the umbilical cord in the new-born child? To what diseases and complications is it liable?

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination
(Part III)

Saturday, December 12, 1914, 10–1

OBSTETRICS AND GYNAECOLOGY

[*Not more than* TWO *questions in each Section to be answered*]

A

1. A woman is in the fourth month of pregnancy, but the ovum has been blighted by the formation of a carneous mole. Describe the morbid anatomy, the course, symptoms, diagnosis and treatment of such a condition.

2. What are the indications for the performance of abdominal Caesarean section? What are the ideal conditions for its success? Describe the operation in detail, including the after-treatment.

3. Describe the cause, course, symptoms and treatment of phlegmasia dolens.

B

4. You are called to a woman, aged 40 years, who is menstruating and is unable to empty the bladder. She has had no pregnancy for five years and has suffered for the last two years from increasing menorrhagia. State your views as to the probable nature of the case and the means you would adopt to determine the diagnosis. How would you treat the case?

5. Describe the causes and treatment of pruritus vulvae.

6. What is a pelvic haematocele? Describe its causation, diagnosis and treatment.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination
(Part III)

Wednesday, June 23, 1915, 10–1

OBSTETRICS AND GYNAECOLOGY

[*Not more than* TWO *questions in each section to be answered.*]

A

1. Discuss the treatment of puerperal eclampsia, taking into consideration the fact that convulsions may occur before, during, or after labour.

2. In a primigravida in labour at term the breech is presenting in a sacro-posterior position. Describe the normal mechanism of labour in such a case and the complications which are most liable to occur in the second stage of labour, including the dangers which threaten the child. Describe the management of the above.

3. You are summoned to a woman at the commencement of labour with her first child and in your routine examination you find that she has a flattened pelvis with a true conjugate of $3\frac{1}{2}$ inches. Discuss your treatment.

B

4. Enumerate the swellings which may be present in the labium majus and give the differential diagnosis.

5. How would you operate for the repair of an old-standing complete laceration of the perineum which involves the rectal wall?

6. How would you diagnose a case of acute gonorrhoea in the female? What would be your treatment? What complications may follow such an attack?

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination
(Part III)

Tuesday, December 14, 1915, 10–1

OBSTETRICS AND GYNAECOLOGY

[*Not more than* TWO *questions in each section to be answered*]

A

1. In what circumstances may the pregnant uterus be abnormally large? How would you make a differential diagnosis between the various forms of enlargement?

2. Discuss the causes, prevention and treatment of primary and secondary *post partum* haemorrhage.

3. What are the indications and contra-indications for delivery by (*a*) forceps, and (*b*) version? Discuss their relative advantages.

B

4. Describe the symptoms, physical signs and diagnosis of malignant disease of the cervix uteri in an early stage.

5. Describe the steps of an operation for the removal of a large cystic tumour of the ovary, including the after treatment.

6. Enumerate the causes of dyspareunia, and discuss briefly their treatment.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

Monday, June 23, 1913, 10–1

PHARMACOLOGY AND THERAPEUTICS

[*Not more than* FOUR *questions to be answered*]

1. What drugs may be used to render the urine (*a*) alkaline, (*b*) acid? Explain how they act, what doses are necessary and in what conditions they are used.

2. Mention the drugs used as intestinal antiseptics and discuss their efficacy.

3. In what ways may *local* anaesthesia be induced for surgical procedures? Discuss the relative merits of and special indications for each method.

4. Write a prescription (with the usual abbreviations) for each of the following conditions:—

(*a*) Frequent dry hard cough.

(*b*) Tapeworm.

(*c*) Sleeplessness from nervous excitement.

(*d*) Persistent diarrhoea.

(*e*) Chlorosis.

5. Describe in general terms the treatment you would adopt in a case of incipient phthisis, with special reference to climate, diet and vaccines.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination

Thursday, June 25, 1914, 10–1

PHARMACOLOGY AND THERAPEUTICS.

[*Not more than* FOUR *questions to be answered.*]

1. What is the rationale for the employment of the following drugs in the conditions specified:—Stramonium in spasmodic asthma; thyroid gland in obesity; phosphorus in rickets; sodium sulphate in poisoning by carbolic acid?

2. State what you know regarding the excretion from the body of the following:—sodium salicylate, salol, urotropine, potassium iodide, ammonium acetate, oil of copaiva.

3. Compare the action of caffeine and digitalis upon the heart; and state under what conditions you might prefer to prescribe caffeine to a patient suffering from valvular disease of the heart.

4. Give a complete account of the treatment you would adopt in a patient suffering from lead poisoning and give the reasons for your treatment.

5. Describe the principles involved in treatment by vaccines, and compare this method of treatment with that by antitoxins.

THE UNIVERSITY OF LEEDS

Degrees of M.B. and Ch.B.
Final Examination
(Part III)

Thursday, June 24, 1915, 10–1.

PHARMACOLOGY AND THERAPEUTICS

[*Not more than* FOUR *questions to be answered.*]

1. Describe fully the action of morphine in man, and show how this bears on its therapeutic uses.

2. What drugs would you use in a case of persistent vomiting? Explain shortly how they act on this condition.

3. By what organs and in what forms are the following drugs excreted:—chloral, morphine, iron, strychnine, mercury, and calcium?

4. What is your opinion in regard to the value of vaccines in (*a*) prophylaxis, (*b*) treatment of diseases? What is the theory on which vaccines are advocated?

5. What is the action of colchicum? Give a prescription for gout containing colchicum.

THE UNIVERSITY OF LEEDS

Diploma in Psychological Medicine

Monday, June 24, 1912, 10–12

DEVELOPMENT, ANATOMY, HISTOLOGY, AND PHYSIOLOGY OF THE BRAIN

[THREE *questions only to be answered*]

1. Give a description of the fissural pattern of the frontal lobe of the human brain.

2. Give a short account of the thesis of Flechsig with regard to 'centres of projection' and 'centres of association'. State whether this thesis has been confirmed or disproved by recent histological investigations.

3. Describe the mode of development of the cerebral cortex, giving a brief account of the structure of the primary laminae of which it is composed.

4. Give a short account of the structure and probable functions of the gyri surrounding the furrow of Rolando.

5. Give a description of the exact localization and of the histological structure of the human visuo-sensory cortex.

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THE UNIVERSITY OF LEEDS

Diploma in Psychological Medicine

Monday, June 24, 1912, 2–5

MORBID ANATOMY AND MORBID HISTOLOGY OF THE BRAIN

[FOUR *questions only to be answered*]

1. Describe the chief types of pathological change which are met with in the cortical nerve cells.

2. Give an account of the morbid anatomy and pathology of subdural deposits (pachymeningitis haemorrhagica).

3. Describe in general terms the probable appearance of the intracranial contents in microcephaly and macrocephaly respectively.

4. Give a description of the morbid histological appearances which are present in a well developed case of general paralysis, and state whether, and if so how, these vary in different regions of the cerebrum.

5. Describe the macroscopic intracranial morbid appearances which may be presented by a case of insanity with epilepsy.

6. Give a histological description of the cortex of the prefrontal region of a case of progressive senile dementia.

THE UNIVERSITY OF LEEDS

Diploma in Psychological Medicine

Thursday, December 12, 1912, 10–12

DEVELOPMENT, ANATOMY, HISTOLOGY AND PHYSIOLOGY OF THE BRAIN

[THREE *questions only to be answered*]

1. Contrast the histological structure of the Betz cell or 'pre-central' region and the visuo-sensory region of the cortex. State their respective functional significance.

2. Describe the fibre-architecture of any one region of the cerebral cortex. Discuss the relation of the fibre-architecture to the cell-architecture.

3. Give a description of the fissural pattern of the parietal lobe of the human brain.

4. State your views with regard to the general functions of the human cerebrum.

THE UNIVERSITY OF LEEDS

Diploma in Psychological Medicine

Thursday, December 12, 1912, 2–5

MORBID ANATOMY AND MORBID HISTOLOGY OF THE BRAIN

[FOUR *questions only to be answered*]

1. Give an account of the chief characteristics presented by a human brain of simple pattern.

2. Give a general description of the chief gross morbid appearances presented by the cerebra in cases of idiocy.

3. Describe the mode of growth of proliferating neuroglia as presented by an active case of general paralysis.

4. Describe the naked-eye morbid intracranial appearances found in a well developed case of stationary dementia.

5. Give an account of the morbid anatomy and pathology of progressive senile dementia.

THE UNIVERSITY OF LEEDS

Diploma in Psychological Medicine

Friday, December 13, 1912, 10–1

PSYCHOLOGY IN RELATION TO THE SYMPTOMATOLOGY OF MENTAL DISEASE

[FOUR *questions only to be answered*]

1. What is meant by the terms 'feeling', 'emotion', and 'sentiment'? Give examples of the more important of these.

2. Explain the term 'organic sensations'. In what respects do they differ from sensations derived from the organs of special sense? Illustrate from your experience of mental disease the influence of the organic sensations on the general cerebral functions.

3. In what respects are the emotions modified in the insane (*a*) from the aspect of feeling and (*b*) from that of expression?

4. Classify the various forms of attention. Indicate the various disturbances of attention which are presented by the insane.

5. What is an illusion? Contrast the illusions of the sane and the insane, and give examples of the chief varieties presented by each.

THE UNIVERSITY OF LEEDS

Diploma in Psychological Medicine

Tuesday, June 25, 1912, 10–1

PSYCHOLOGY IN RELATION TO THE SYMPTOMATOLOGY OF MENTAL DISEASE

[FOUR *questions only to be answered*]

1. Distinguish between the terms 'perception' and 'conception'. Illustrate the various processes of cerebral association which are included under these terms.

2. Classify the more important emotions and sentiments. Do the emotions bear any special relationship to the different grades of intellectual activity?

3. Discuss the probable nature of the sensori-psychomotor activity which is exhibited by a case of simple acute mania.

4. Describe the genesis of a fixed delusion. Discuss the probable source (from the aspects of emotion, intellect, or volition) from which such a delusion may arise.

5. Define the terms 'illusion' and 'hallucination'. Describe these symptoms and discuss their source and significance in the sane, the non-demented insane, and the demented insane.

6. Is it possible to trace any relationship between delusional states and the grade of intellect, degree of education, and amount of experience of the respective individuals in whom such occur? Discuss this question.

THE UNIVERSITY OF LEEDS

Diploma in Psychological Medicine

Thursday, December 11, 1913, 10–12

DEVELOPMENT, ANATOMY, HISTOLOGY, AND PHYSIOLOGY OF THE BRAIN

[THREE *questions only to be answered*]

1. Give a description of the cell-structure of the cerebral cortex, illustrated by any one type with which you are familiar.

2. The cortex in front of the furrow of Rolando has been described as 'sensory', 'motor', 'sensori-motor', and 'psychomotor'. State your views on the question, giving your reasons in full.

3. Compare the fissural patterns of the human and anthropoid frontal lobes.

4. Describe the histological features which you regard as characteristic of 'embryonic', in contradistinction to 'functionally active', cortex.