

APRIL - 2001

[KD 704]

Sub. Code : 4164

FIRST B.Pharmacy DEGREE EXAMINATION.

(Revised Regulations)

Paper IV — ANATOMY, PHYSIOLOGY AND HEALTH
EDUCATION

Time : Three hours Maximum : 90 marks
Two and a half hours Sec. A & Sec. B : 60 marks
for Sec. A & Sec. B Section C : 30 marks

Answer Sections A and B in the same Answer Book.

Answer Section C in the answer sheet provided.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

1. Describe the mechanism of respiration. Write notes on internal respiration. (10 + 5)
2. Write elaborative notes on the Autonomic nervous system. (15)
3. With the help of a neat diagram, describe the female reproductive system and menstrual cycle. (8 + 7)
4. Draw and describe the structure of the thyroid gland and give its functions. (5 + 10)

SECTION B — (6 × 5 = 30 marks)

Answer any SIX questions.

All questions carry equal marks.

5. How are the blood groups classified?
6. Describe the composition and circulation of the cerebro spinal fluid.
7. Write notes on ECG.
8. Name the different types of salivary glands. Write down the composition and functions of saliva.
9. How is the blood pressure regulated?
10. Write notes on artificial respiration.
11. Describe the permanent method of family planning.
12. Draw and label the nephron.

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Time : Three hours Maximum : 90 marks
Two and a half hours Sec. A & Sec. B : 60 marks
for Sec. A and Sec. B Section C : 30 marks

Answer Sections A and B in the same Answer Book.

Answer Section C in the Answer Sheet provided.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

- (a) Define blood coagulation. Write the steps involved in intrinsic and extrinsic pathway of blood coagulation. Name two anticoagulants of different mode of action. (1 + 4 + 3 + 2)

(b) Define Landsteiner's law. Tabulate agglutinogens and agglutinins of ABO and Rh system of blood groups. (2 + 3)
- Describe the mechanism of urine formation. (6 + 6 + 3)

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3. (a) Define reflex action. Draw a labelled diagram of a simple reflex arc. How are reflexes classified clinically? Give an example for each type. $(1 + 2\frac{1}{2} + 5\frac{1}{2})$

(b) Mention four functions of hypothalamus and explain any one. $(4 + 2)$

4. (a) Describe briefly the anatomy of the heart and indicate the direction of circulation of blood through the heart. $(4 + 2)$

(b) Define cardiac cycle giving its normal duration. List the events of cardiac cycle and describe any one of them. $(2 + 2\frac{1}{2} + 4\frac{1}{2})$

SECTION B --- $(6 \times 5 = 30 \text{ marks})$

Answer any SIX questions.

All questions carry equal marks.

5. Write a brief note on regulation of arterial blood pressure. (5)

6. List the anterior pituitary hormones and mention the actions of any one of them. $(2\frac{1}{2} + 2\frac{1}{2})$

7. Define health. Add a note on indicators of health. $(1 + 4)$

8. Classify the joints giving an example for each type. $(1\frac{1}{2} + 1\frac{1}{2} + 2)$

9. Mention the different female contraceptive methods. Give the mode of action, merits and demerits of any one of them. $(2\frac{1}{2} + 2\frac{1}{2})$

10. Describe briefly the mechanism of respiration. (5)

11. Give the structure and functions of the skin. $(2 + 3)$

12. Write a note refractive errors of the eye. (5)

MARCH - 2002

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Time : Three hours Maximum : 90 marks
Two and a half hours Sec. A & Sec. B : 60 marks
for Sec. A & Sec. B Section C : 30 marks

Answer Sections A and B in the same answer Book.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

1. Describe the structure of a nephron. Add a note on the mechanism of urine formation. (5 + 10)
2. With the help of a labelled diagram describe menstrual cycle. (15)
3. Define blood coagulation. Give normal clotting time. Represent schematically the intrinsic and extrinsic mechanisms of blood coagulation. Name two clotting disorders and cause for each. (1 + 1 + 10 + 3)
4. Explain briefly the normal and chemical regulation of respiration. (7 + 8)

SECTION B — (6 × 5 = 30 marks)

Answer any SIX questions.

Each carry equal marks.

5. Draw and label a myelinated neuron. Add a note on saltatory conduction. (3 + 2)
6. Define arterial blood pressure. Give normal values. Explain briefly the role of baro receptors immediately after blood loss. (1 + 1 + 3)
7. Enumerate the functions of saliva. Explain any one. (3 + 2)
8. Name the primary tissues. Give the salient features of any one of them. (2 + 3)
9. Add a note on the basic principles of rural health and sanitation. (5)
10. Give the contents and functions of middle ear. (2 + 3)
11. Name the hormones of adrenal gland. Explain briefly any two actions of any one of them. (3 + 2)
12. Define reflex action. Draw and label the diagram of a reflex arc. (1 + 4)

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EDUCATION

Time : Three hours Maximum : 90 marks

Two and a half hours Sec. A & Sec. B : 60 marks

for Sec. A and Sec. B Section C : 30 marks

Answer Sections A and B in the same Answer Book.

Answer Section C in the Answer Sheet provided.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

1. (a) Give the normal concentration of different plasma proteins. Enumerate their functions and explain any one of them. (3 + 4 + 3)
(b) Write a note on the functions of platelets. (5)
2. (a) Draw a labelled diagram to show the histology of the thyroid gland. Write the steps involved in synthesis of thyroxine. (3 + 4)
(b) Briefly describe the changes taking place in the ovaries, during a 28 day menstrual cycle. (8)

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3. (a) What is the normal heart rate? Write a note on reflex control of heart rate. (1 + 7)

(b) List the factors influencing venous return to the heart. Explain how venous return controls cardiac output. (4 + 3)

4. (a) Describe the functions and control of salivary glands. (4 + 4)

(b) Write a short note on protein and fat digestion in the gut. (4 + 3)

SECTION B — (6 × 5 = 30 marks)

Answer any SIX questions.

All questions carry equal marks.

5. Name the posterior pituitary hormones. Describe the actions of any one of them. (1 + 4)

6. Write a note on balanced diet. Define the following terms : (3 + 2)

(a) Scurvy

(b) Kwashiorkor's syndrome.

7. Briefly describe the physiology of hearing. (5)

8. Name the functions of the testes. Explain any one of them. (2 + 3)

9. Write a note on prevention of contagious disease. (5)

10. Define Micturition. Explain the mechanism of micturition. (1 + 4)

11. Write briefly on functions of (a) Cerebellum (b) Medulla oblongata. (3 + 2)

12. Define or explain the following terms : (5)

(a) Hypoxia

(b) Myxoedema

(c) Gigantism

(d) Jaundice

(e) Anaemia.

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SECTION B — (6 × 5 = 30 marks)

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Two and a half hours Sec. A & Sec. B : 60 marks
for Sec. A and Sec. B Section C : 30 marks
Half an hour for Section C

Answer Sections A and B in the **SAME** Answer Sheet.

Answer Section C in the Answer Sheet provided.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

1. Draw a diagram to show the connection between hypothalamus and pituitary. Name the hormones of hypothalamus and pituitary. Describe briefly the actions of any one hormone of anterior pituitary. (3 + 6 + 6)
2. Draw a neat labelled diagram of eye. Add a note on refractory errors of the eye. (7 + 8)
3. Draw a diagram to show the parts of respiratory tract. Add a note on mechanisms of breathing. (7 + 8)
4. Define arterial blood pressure giving normal values. Write a note on the regulation of arterial blood pressure. (3 + 12)

Answer any SIX questions.

5. Write a note on family planning in females. (5)
6. Classify white blood cells. Mention the functions of WBC. Name four conditions for increase in WBC count. (1½ + 1½ + 2)
7. Draw and label the diagram of Neuro Muscular Junction (NMJ). Mention the steps of Neuro muscular transmission. (2½ + 2½)
8. Define and classify hypoxia giving an example for each. (1 + 4)
9. Define deglutition. Mention the stages. Add a note on the first stage of deglutition. (1 + 1½ + 2½)
10. Describe briefly the mechanism of micturition. (5)
11. Give the composition and functions of cerebrospinal fluid. (5)
12. Mention the functions of skin. Explain any one of them. (3 + 2)

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FIRST B.Pharm. DEGREE EXAMINATION.

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Paper IV — ANATOMY, PHYSIOLOGY AND HEALTH
EDUCATION

Time : Three hours Maximum : 90 marks

Two hours and forty minutes Sec. A & Sec. B : 70 marks
for Sec. A and Sec. B

Twenty minutes for Sec. C Section C : 20 marks

Answer Sections A and B in the **SAME** Answer Sheet.

Answer Section C in the Answer Sheet provided.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

1. Discuss the anatomy of female reproductive system and Ovarian cycle.
2. Give an account of transport of O₂ and CO₂ in the blood. Add a note on chemical control of respiration.
3. Explain the outflow and functions of divisions of autonomic nervous system.

SECTION B — (8 × 5 = 40 marks)

Answer any EIGHT questions.

4. Describe various regulation of blood pressure.
5. Discuss the heart sound and its importance.
6. Describe the digestion in small intestine.
7. What is reflex action? Write its mechanism.
8. Discuss the insulin chemistry and function.
9. Describe different contraceptive methods used in females.
10. Explain the auditory and non-auditory functions of ear.
11. Discuss the importance of blood group determination.
12. Give the composition and functions of cerebro spinal fluid.
13. Write a note on prevention of contagious diseases.

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SECTION B — (8 × 5 = 40 marks)

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Paper IV — ANATOMY, PHYSIOLOGY AND HEALTH
EDUCATION

Time : Three hours Maximum : 90 marks

Sec. A & B : Two hours and Sec. A & B : 70 marks
forty minutes

MCQ : Twenty minutes MCQ : 20 marks

Answer Sections A and B in the **SAME** Answer Book.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

1. Describe structure and functions of respiratory organs.
2. Describe various parts of alimentary canal and explain their role in digestion of food.
3. Describe anatomy and physiological functions of thyroid gland. Explain the consequences of hypothyroidism and hyperthyroidism.

Answer any EIGHT questions.

4. Describe blood coagulation process.
5. Explain functions of cerebellum.
6. Enumerate hormones of anterior pituitary gland and write their functions.
7. Explain in brief structure and functions of skin.
8. Write functions of plasma proteins.
9. Comment upon water borne diseases.
10. Explain in short functions of kidney.
11. Write a note on blood groups.
12. Write a note on family planning in females.
13. Give composition and functions of cerebrospinal fluid.

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SECTION B

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Time : Three hours Maximum : 90 marks

Sec. A & B : Two hours and forty minutes Sec. A & B : 70 marks

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer Sections A and B in the SAME Answer Book.

Answer M.C.Q. in the Answer Sheet provided.

SECTION A

Answer any TWO questions : (2 × 15 = 30)

1. Describe the factors responsible for maintenance of normal blood pressure. Write a note on hypertension. (7 + 8)
2. Explain the structure and functions of cerebrum. (7 + 8)
3. Explain the terms digestion and metabolism. Write a note on digestion and metabolism of carbohydrates. (5 + 10)
4. Describe the anatomical structure and physiological functions of anterior and posterior lobes of pituitary body. (10 + 5)

Answer any EIGHT questions : (8 × 5 = 40)

All questions carry equal marks.

5. Give classification of joints with examples. (2 + 3)
6. Write a note on principles of rural health and sanitation. (2 + 3)
7. In brief, explain the functions of spinal cord.
8. Explain the functions of gastric and intestinal glands. (3 + 2)
9. Write a note on cardiac cycle.
10. Describe in short the process of micturition.
11. Dwell upon the functions of lymph nodes.
12. Explain the role of kidneys in maintaining acid base balance.
13. Write a note on coagulation of blood.
14. Explain various methods of family planning in short.