APRIL - 2003

[KI 706] **Sub. Code : 4181**

SECOND B.Pharm. DEGREE EXAMINATION.

(Revised Regulations)

Paper I — BIOCHEMISTRY

Time : Three hours — Maximum : 90 marks

Two and a half hours for Sec. A and Sec. B — Sec. A & Sec. B : 60 marks; 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) Write the enzyme classification and explain the factors affecting enzyme activity. (3 + 7 = 10)

(b) Discuss the enzyme inhibition. (5)

2. (a) Explain the chemical reactions involved in the citric acid cycle and write its significance. (6 + 2 = 8)

(b) Describe the pentose phosphate pathway and write its importance. (5 + 2)

3. Describe the chemistry, dietary sources, functions and deficiency manifestations of (7 + 8)

(a) Vitamin C and

(b) Vitamin D.

4. (a) Describe the β-(beta) oxidation of fatty acids. (5)

(b) What is ketogenesis? Explain the production and utilization of ketone bodies in the body. (1 + 9 = 10)

SECTION B — (6 × 5 = 30 marks)

5. Write short answers on any SIX of the following :

(a) Polysaccharides.

(b) Diagnostic applications of enzymes.

(c) Functions and deficiency manifestations of vitamin A.

(d) Structure of DNA.

(e) Phospholipids.

(f) Coenzymes.

(g) Essential fatty acids.

(h) Biological importance of iron.

(i) Liver function tests.

OCTOBER - 2003

[KJ 706] **Sub. Code : 4181**

SECOND B.Pharm. DEGREE EXAMINATION.

(Revised Regulations)

Paper I — BIOCHEMISTRY

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 Book.

Answer Section C in the Answer Sheet Provided.

SECTION A — (2 × 15 = 30 marks)

Answer any TWO.

1. Classify proteins with suitable examples. Discuss the structure of proteins. (6 + 9 = 15)

2. What are nucleoside, nucleotide and nucleic acid? Discuss the structures and properties of DNA and t–RNA. (3 + 6 + 6 = 15)

3. Write briefly on the glucose absorption :

(a) From the G.I. Tract. (5)

(b) Describe the process of glycogenesis and glycogenolysis. How are they regulated? (6 + 4 = 10)

SECTION B — (8 × 5 = 40 marks)

Answer any EIGHT.

4. Give an account of the structures of disaccharides and polysaccharides.

5. Discuss the different types of haemoglobin and their biological role.

6. Explain the mechanism of action of enzymes.

7. Outline the sources, requirement, function and deficiency manifestation of vitamin A.

8. Write a note on the mode of action of insulin.

9. Discuss the structure of phospholipid.

10. Outline the steps of gluconeogenesis.

11. Explain any two functional tests of liver.

12. Dietary fibres.

13. Ketone bodies

———————