FEBRUARY - 2006

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

SECOND B.Pharm. DEGREE EXAMINATION.

(Revised Regulations)

Paper I — BIOCHEMISTRY

Time : Three hours Maximum : 90 marks

Theory : Two hours and forty minutes Theory : 70 marks

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

I. Long Essay : (2 × 15 = 30)

Answer any TWO full questions.

1. (a) What are enzymes? Derive the equation Km (Michaelis-Menten constant) = [S]. (2 + 6)

(b) Explain the mechanism of action of enzymes and discuss about the enzyme inhibition. (3 + 4)

2. (a) Write the classification of carbohydrates and explain the chemical reactions involved in glycolysis. (2 + 6)

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

3. (a) Describe the extra mitochondrial synthesis palmitic acid. (8)

(b) Explain the production and utilization of ketone bodies. (3 + 4)

4. Describe the chemistry, dietary sources, functions and deficiency manifestations of

(a) Vitamin 'A' and

(b) Vitamin 'C'. (8 + 7)

II. Short notes on : (8 × 5 = 40)

Write short answers on any EIGHT of the following.

1. Biological importance of calcium in the body.

2. Liver function tests.

3. Nucleic acids.

4. Essential fatty acids.

5. Beta (β) oxidation of fatty acids.

6. Metabolic disorders of Urea cycle.

7. Hormones produced from anterior pituitary gland and their functions.

8. Coenzymes.

9. Lipoproteins.

10. DNA replication.

AUGUST - 2006

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Paper I — BIOCHEMISTRY

Time : Three hours Maximum : 90 marks

Theory : Two hours and forty minutes Theory : 70 marks

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

I. Essay on :

Answer any TWO questions.

1. (a) Describe the Hexose monophosphate shunt pathway. Give its metabolic significance.

(b) Explain Gluconeogenesis and its significance. (12 + 8 = 20)

2. Outline the reactions in the conversion of pyruvate to Acetyl CoA. Describe in detail Citric Acid cycle with energetis. (20)

3. (a) Write the chemistry, biological functions, deficiency manifestations of Vitamin A.

(b) Name any two co–enzymes and give their biochemical functions. (15 + 5 = 20)

4. (a) Outline the biosynthesis of cholesterol. Add a note on its regulation.

(b) What are platelets? Mention their role in the body. (15 + 5 = 20)

II. Short notes : (6 × 5 = 30)

Answer any SIX questions.

1. Describe the renal function tests.

2. Explain the biological significance of cyclic AMP.

3. Write the role of phosphorus and magnesium in the body.

4. Describe the Watson–Crick structure of DNA.

5. What are Ketone bodies? How Ketosis is produced in the body?

6. Write an account of digestion and absorption of proteins in the body.

7. What are Enzymes? Explain the mechanism of Enzyme action.

8. Discuss the primary and secondary structure of protein.

AUGUST - 2006

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SECOND B.Pharm. DEGREE EXAMINATION.

(Revised Regulations)

Paper I — BIOCHEMISTRY

Time : Three hours Maximum : 90 marks

Theory : Two hours and forty minutes Theory : 70 marks

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

I. Long Essay : (2 × 20 = 40)

Answer any TWO questions.

1. What are enzymes? Classify them with examples with a note on co.enzymes.

2. Define nucleosides and nucleotides? How are purine nucleotides synthesized in the body? Explain in detail.

3. Explain citric acid cycle with its significance.

4. What are lipids? Explain the β - oxidation of lipids explain the biosynthesis of RNA.

II. Short notes : (6 × 5 = 30)

Write any SIX questions.

1. Transport processes across cell membrane.

2. What are essential aminoacids? Explain the metabolism of tyrosine.

3. Explain the biochemical role of vit-C.

4. Explain the biochemical role of insulin.

5. Explain enzyme induction and repression in brief.

6. Explain three liver function tests.

7. DNA replication.

8. Metabolic disorders of urea cycle.

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