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

SECOND B.Pharm. DEGREE EXAMINATION.

(Revised Regulations)

Paper I — BIO-CHEMISTRY

Q.P. Code : 564181

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 questions.

1. (a) Explain in detail, biosynthesis of palmitic acid.

(b) Give an account on active transport. (10 + 5 = 15)

2. (a) Explain the schematic representation of glycolysis.

(b) Discuss the enzymes of electron transport chain. (10 + 5 = 15)

3. (a) Enumerate the various types of enzyme inhibition.

(b) Discuss the biological role of sodium. (10 + 5 = 15)

4. (a) Write in detail about the source, daily requirement, biological functions and deficiency status of Vitamin-A.

(b) Explain the structure of t-RNA. (10 + 5 = 15)

II. Short notes : (8 × 5 = 40)

Answer any EIGHT questions.

(1) Outline the reactions of glycogenolysis.

(2) Give an account on enzyme classification.

(3) Classify lipids with suitable example.

(4) Enumerate the secondary structure of protein.

(5) Write a note on Thiamine pyrophosphate.

(6) What are ketosis? How ketosis is produced in the body?

(7) Explain the term Basal Metabolic Rate.

(8) Haemoglobin.

(9) Passive diffusion and active transport.

(10) Write a short note on Heteropolysaccharides.

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[KS 739] **Sub. Code : 4230**

FIRST B.Pharm. DEGREE EXAMINATION.

(Regulation 2006–2007 onwards)

(Common to IInd B.Pharm. Paper I — Regulation 2004)

Paper IV — BIO-CHEMISTRY

Q.P. Code : 564230

Time : Three hours Maximum : 90 marks

Descriptive : 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 questions.

1. (a) Outline the stages involved in the elimination of protein nitrogen. (10)

(b) Explain essential amino acids. (5)

2. (a) Discuss the anaerobic oxidation of glucose. (10)

(b) Write a note on reducing sugars. (5)

3. (a) Define the term vitamin and write about the sources, biochemical role, deficiency disorders of Thiamine, Niacin and cyanocobalamin. (10)

(b) Explain the sources and biochemical role of vitamin C. (5)

4. (a) What are the various factors influencing enzyme action? (10)

(b) Explain competitive inhibition. (5)

5. Write short notes on : (8 × 5 = 40)

Answer any EIGHT questions.

(a) Genetic code.

(b) Isoenzymes.

(c) Reactions of beta–oxidation.

(d) Mucopolysaccharides.

(e) Essential Fatty acids.

(f) Lipoproteins.

(g) Immunoglobulins.

(h) Sodium pump.

(i) Biochemical role of vitamins D.

(j) Basal Metabolic Rate.

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August 2008

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SECOND B.Pharm. DEGREE EXAMINATION.

(Revised Regulations)

Paper I — BIO-CHEMISTRY

Q.P. Code : 564181

Time : Three hours Maximum : 90 marks

I. Long Essay : (2 × 20 = 40)

Answer any TWO questions.

1. (a) Write in detail about the source daily requirement, biological functions and deficiency status of Vitamin C. (10)

(b) Discuss Biosynthesis of Heme. (10)

2. (a) Give a brief account of the different transport process across biomembranes. (10)

(b) Describe the citric acid cycle with energetics. (10)

3. (a) What are lipids? Explain the β-oxidation of lipids. (10)

(b) Explain the role of immunoglobulins. (10)

II. Short notes : (8 × 5 = 40)

Answer any EIGHT questions.

1. DNA-structure.

2. Describe the renal function tests.

3. What are enzymes? Classify with suitable examples.

4. Describe the pyruvate dehydrogenase complex and its reactions.

5. Phenylketonuria.

6. Heteropolysaccharides.

7. Pyrimidine biosynthesis.

8. Bile salts.

9. Role of insulin.

10. Oxidative level phosphorylation.

III. Short answers : (5 × 2 = 10)

Answer any FIVE questions.

1. Distinguish Glucogon and glycogen.

2. Define coenzyme with examples.

3. Name essential aminoacids.

4. Name Normal constituents of urine.

5. Rothra's test.

6. Atherosclerosis.

7. Codons.

August 2008

[KT 739] **Sub. Code : 4230**

FIRST B.Pharm. DEGREE EXAMINATION.

(Regulation 2006-2007 onwards)

(Common to Second B.Pharm. Paper I — Regulation 2004)

Paper IV — BIO-CHEMISTRY

(Q. P. Code : 564230)

Time : Three hours Maximum : 90 marks

I. Long Essay : $(2 \times 20 = 40)$

Answer any TWO questions.

1. (a) Write in detail about the sources, chemistry, biochemical role, daily requirements and deficiency manifestations of vitamin A. (1 + 3 + 4 + 1 + 1)

(b) Discuss the metabolism of Sodium. (10)

2. (a) Describe the metabolic pathways of thyrosine. (7.5)

(b) Discuss the reaction of beta oxidation of palmitic acid with energetics. (7.5)

(c) Biosynthesis of Ketone bodies. (5)

3. (a) Explain the biosynthesis of bile pigments in the body. (10)

(b) Structure of t-RNA. (6)

(c) What are nucleosides and nucleotides? Give examples. (4)

II. Write Short notes on : $(8 \times 5 = 40)$

Answer any EIGHT question.

1. Reducing disaccharides.

2. Clearance tests of Urine.

3. Specific dynamic action.

4. Lac-operon concept.

5. rDNA technology.

6. Eicosanoids.

7. Structure and biochemical functions of insulin.

8. Digestion and absorption of carbohydrate.

9. Nucleoprotein.

10. Enzyme inhibition.

III. Write short answers on : $(5 \times 2 = 10)$

Answer any FIVE questions.

1. What is epimer? Give example.

2. Define the terms : transcription and translation.

3. Give any two coenzyme activities of pyridoxal phosphate.

4. What is denaturation? Give examples for denaturating agents.

5. Give examples of bile pigments and bile salts.

6. What is saponification number? Give its significance.

7. What is basal metabolic rate?
