FEBRUARY - 2007

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

SECOND B.Pharm. DEGREE EXAMINATION.

(Revised Regulations)

Paper I — BIO-CHEMISTRY

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 : (2 × 20 = 40)

Answer any TWO questions.

1. (a) Discuss the properties of proteins.

(b) Classify amino acids with examples.

2. (a) Enumerate the enzyme activity affecting factors.

(b) Outline the reactions of β-oxidation of fatty acids.

3. (a) Give a brief account of the different transport processes across bio membranes.

(b) Discuss the reaction of gluconeogeneeis.

4. (a) Write in detail about the coenzyme form, biochemical function, deficiency diseases of Thiamine.

(b) Discuss the metabolism of Iron.

II. Short notes : (6 × 5 = 30)

Answer any SIX questions.

1. Discuss the biochemical functions of anterior pituitary hormones.

2. Narrate the nutritional importance of carbohydrate, lipid and proteins.

3. Give an account of the biochemistry of urine.

4. Discuss the reactions involved in detoxification with suitable examples.

5. Outline the reaction involved in urea cycle.

6. Discuss the structure of DNA.

7. Give an account of the structures and function of immunoglobulins.

8. Classify carbohydrates with suitable examples.

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FEBRUARY - 2007

[KQ 739] **Sub. Code : 4181**

SECOND B.Pharm. DEGREE EXAMINATION.

(Regulations 2004)

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. Discuss enzyme kinetics with a note on Michaelis-Menton equation.

2. What are Carbohydrates? Classify them. Describe in detail gluconeogenesis.

3. Describe genetic organization of mammalian genome.

4. What are nucleosides and nucleotides? Explain the biosynthesis of pyrimidine nucleotides.

II. Short notes. (6 × 5 = 30)

Write any SIX questions.

1. What are coenzymes? Describe their biochemical role.

2. Ketosis.

3. Describe metabolism of phenyl alanine.

4. Explain the role of immunoglobulins.

5. Describe the biochemical role of Vitamin-C.

6. Explain the biochemical role of insulin.

7. Significance of blood analysis.

8. Explain the biochemical role of sodium and calcium.

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

SECOND B.Pharm. DEGREE EXAMINATION.

(Revised Regulations)

Paper I — BIO-CHEMISTRY

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

SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

1. What are proteins? Classify them with examples and describe the biosynthesis of proteins.

2. Name the various pathways of carbohydrate metabolism. Describe the oxidation of glucose and its bioenergetics.

3. What are coenzymes? Describe the chemistry, source, biochemical role, daily requirements and deficiency manifestations of folic acid.

4. Define and classify lipids with examples. Describe the biosynthesis of fatty acid and its significance.

SECTION B — (8 × 5 = 40 marks)

Answer any EIGHT of the following.

1. Describe the reactions and importance of urea cycle.

2. Write notes on nucleoproteins.

3. Describe the structure and functions of t-RNA.

4. Explain the chemical nature and biochemical functions of insulin.

5. Describe the mechanism of action of enzymes.

6. Name and describe the functions of poly unsaturated fatty acids.

7. Describe the Michaelis-Menten equation.

8. Liver function tests.

9. Describe the pyruvate dehydrogenase complex and its reactions.

10. Describe the biosynthesis of proline.

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August-2007

[KR 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

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 : $(2 \times 15 = 30)$

Answer any TWO questions.

1. (a) Classify proteins with suitable examples.

(b) Discuss the reactions of β –oxidation.

2. (a) Briefly describe the reactions of hexose monophosphate shunt. What is its significance?

(b) Determine Michaeli's Menten equation for unienzyme and unisubstrate reaction. What is the significance of KM?

3. (a) Discuss about the source, chemistry and biochemical functions of riboflavin.

(b) Describe any two functional tests of liver.

4. (a) Give a short account of the sources, biochemical functions and deficiency diseases of calcium.

(b) Discuss the structures of DNA.

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

Answer any EIGHT questions.

1. Functions and structure of cholesterol.

2. Separation of proteins.

3. Coenzyme forms and biochemical functions of pyridoxine.

4. Structures and functions of thyroxin.

5. Clinical application of enzymes.

6. Determination of standard free energy and its significance.

7. Brief account of genetic engineering.

8. Beri Beri.

9. Transport across membranes.

10. tRNA.
