

APRIL - 2001

[KD 706]

Sub. Code : 4181

SECOND B.Pharmacy DEGREE EXAMINATION.

(Revised Regulations)

Paper I -- BIOCHEMISTRY

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. (a) Classify enzymes with examples as per IUB recommendation. (5)
(b) Explain enzyme induction and enzyme inhibition with examples. (10)
2. (a) What is substrate level phosphorylation? Illustrate with two examples. (5)
(b) Discuss oxidative phosphorylation in the mitochondria. Give the significance of the respiratory chain. (10)
3. (a) Give the structure of double helical DNA explaining its features. (5)
(b) How are the DNA and RNAs involved in protein biosynthesis. (10)

4. (a) Define Basal Metabolism. What are the factors that influence BMR? (5)
(b) Write in detail about the Kidney function tests. (10)

SECTION B — (6 × 5 = 30 marks)

5. Write briefly on SIX of the following :
 - (a) Pellagra.
 - (b) Rickets.
 - (c) Functions of pyridoxal phosphate.
 - (d) Formation of ketone bodies and their utilisation.
 - (e) Urea clearance test and its significance.
 - (f) Prostaglandins.
 - (g) Detoxification of drugs.
 - (h) Intestinal disaccharidases and their functions.
 - (i) Gluconeogenesis.

NOVEMBER - 2001

[KE 706]

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SECTION A — (2 × 15 = 30 marks)

Answer any TWO questions.

1. (a) Classify lipids giving examples. (5)
(b) Describe the beta oxidation of Palmitic acid and calculate the energy yield in terms of ATP. (7 + 3 = 10)
2. (a) Describe Wald's visual cycle. (5)
(b) Give the sources in the daily diet, requirements, functions and deficiency state of vitamin C. (1 + 2 + 4 + 3 = 10)

3. (a) What is the chemical nature of Insulin? Where is it formed? How does it respond in the fed and fasting states? (2 + 3 = 5)

(b) Give the reactions of the Krebs's Cycle. List the co-enzymes involved in this cycle. (7 + 3 = 10)

4. (a) What is dietary essential amino acid? Name them. (1 + 4 = 5)

(b) Describe the synthesis of Niacin and Serotonin from Tryptophan. (7 + 3 = 10)

SECTION B — (6 × 5 = 30 marks)

5. Write briefly on SIX of the following :
- (a) NPN substances excreted in urine
 - (b) Fuel value of foods
 - (c) Normal biochemical composition of CSF and their variations in disease
 - (d) Absorption of calcium
 - (e) Active methionine, its synthesis and functions
 - (f) Prostaglandins
 - (g) Mode of action of drugs
 - (h) Dietary sources and functions of iodine
 - (i) Extra cellular buffers of blood.

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