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[This question paper contains 4 printed pages.]

Your Roll No.....

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Sr. No. of Question Paper : 1432

Unique Paper Code : 32231303

Name of the Paper : Fundamental of Biochemistry

Name of the Course : **B.Sc. (Hons.) Zoology (LOCF)**

Semester : III

Duration : 3 Hours Maximum Marks : 75

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt **FOUR** quesiions in all.
3. Question No. **1** is compulsory.

1. (a) Define the following terms : (7)

   (i) Eicosanoids

   (ii) Epimer

   (iii) Amphipathy

P.T.O.

(iv) Isozymes

(v) Pitch of the DNA

(vi) Plasmalogens

(vii) pKa value

(b) Differentiate between the following pairs of terms : (6×2 =12)

(i) Cysteine and Cystine

(ii) Hemiacetal and Hemiketal

(iii) Nucleoside and Nucleotide

(iv) Cofactor and Coenzyme

(v) Peptide and Glycosidic bond

(vi) Phi and Psi angle

(c) Give the names and structures of the following: (4×2=8)

(i) A disaccharide composed of glucose and fructose

(ii) An amino acid with aromatic R group

(iii) A purine nitrogenous base

(iv) A saturated C-16 fatty acid

2. (a) Describe various forms of DNA with special reference to Watson and Crick Model? (8)

(b) Explain the C_0t-curvesanalysis with the help of graph. (4)

3. (a) Give an account on the structural and functional features of phospholipids. (7)

(b) Describe the physiological importance of saturated and unsaturated fatty acids. (5)

4. (a) Elucidate the Michaelis-Mentenequation for a one enzyme one substrate reaction. (7)

(b) What factors are responsible for affecting the enzyme activity. Discuss. (5)

5. (a) Explain various levels of organization of protein structure and their significance. (9)

(b) What are essential and non-essential amino acids? Cite the examples. (3)

P.T.O.

6. (a) Give a detailed account of 'structure and function of any two homo and hetero polysaccharides. (8)

(b) Describe the structural properties of Monosaccharides. (4)

7. Write short notes on any **three** of the following : (4×3=12)

(i) Lineweaver-Burk Plot

(ii) Immunoglobulins

(iii) Cholesterol

(iv) induced fit theory of Enzyme action

(v) t-RNA