2072
B.Sc. (Hons.) Biotechnology
Second Semester
BIOT- 204-T: Basic Biochemistry

Time allowed: 3 Hours   Max. Marks: 67

NOTE: *Attempt five questions in all, including Question No. I which is compulsory and selecting one question from each Unit.*

x-x-x

I.   Attempt the following:-

a) Define Dissociation constant.   (2)

b) What are L and D amino acids?   (2)

c) What is Acid Value of fats?   (2)

d) List names of fat soluble vitamins.   (2)

e) Give two examples of Non Reducing sugars.   (2)

f) What is a Glycosidic bond?   (2)

g) What are Aromatic and Aliphatic amino acids? List examples.   (3)

UNIT - I

II.   a) Explain Associative and Dissociative Properties of water.

b) Discuss Handerson Hasselbach equation and its significance.   (6,7)

III.   a) Write a note on Structure and function of Lipopolysaccharides.

b) What are different types and properties of Carbohydrates   (6,7)

UNIT - II

IV.   a) How are Lipids Classified? Explain.

b) Explain the structure and functions of Phosphoglycerides.   (6,7)

V.   a) Discuss the structure and functions of Sterols.

b) Write a note on Structure and function of Prostaglandins.   (6,7)

P.T.O.

UNIT - III

VI. Write notes on:-

   a) Mechanism of action of Steroid Hormones

   b) Nicotinic acid as cofactor   (2x6½)

VII. a) Discuss chemistry and function of vitamin A.

   b) Write a note on the Biochemical and physiological Role of vitamin D.   (7,6)

UNIT - IV

VIII. a) Discuss characteristic chemical reactions of amino acids.

   b) Discuss the Different levels of organization of protein structure.   (7,6)

IX. a) Discuss about forces involved in Stabilizing Primary and secondary structure of Proteins.

   b) How are Proteins Classified? List functions.   (7,6)

x-x-x