

1059

B.Sc. (Hons.) Biotechnology

Second Semester

BIOT- Sem-II-IV-T: Basic Biochemistry

Time allowed: 3 Hours

Max. Marks: 67

NOTE: Attempt five questions in all, including Question No. IX (Unit-III) which is compulsory and selecting two questions each from Unit I - II.

x-x-x

UNIT - I

- I. a) Discuss the physicochemical properties of water.
b) What will be the concentration of OH^- in a solution with H^+ concentration of 1.5×10^{-4} .
(2x6½)
- II. a) Discuss the structure and function of various disaccharides.
b) Discuss lipopolysaccharides in detail.
(8,5)
- III. a) Give the classification of lipids and fatty acids with suitable examples.
b) Write a short note on terpenes.
(8,5)
- IV. a) Describe the structure of various types of phospholipids.
b) Briefly discuss the sterols of plants and animals.
(8,5)

UNIT - II

- V. a) Discuss the hormones that are secreted by the pancreas.
b) Comment on the biological role of any two vitamins as cofactors.
(8,5)
- VI. a) Describe the role of vitamin A, D and K in the body.
b) Comment on the role of epinephrine and norepinephrine.
(8,5)
- VII. a) Describe primary and secondary structure of proteins.
b) Draw structure of amino acids having (i) aromatic rings(ii) thiol group.
(7,6)
- VIII. a) Discuss the nonprotein and rare amino acids in detail.
b) Give classification of along with their functions.
(7,6)

P.T.O.

(2)

UNIT - III

IX. Explain the following briefly:-

- a) pl
- b) Osmosis
- c) Glycolipds
- d) w-fatty acids
- e) Phosphatidic acid
- f) β -D-Fructose
- g) Corticotropin releasing hormone
- h) Aldosterone
- i) Acidic amino acids
- j) Beta turns

(10x1½)

x-x-x