

FACULTY OF SCIENCE
B.Sc. I-Semester (CBCS) Examination, May / June 2018

Subject : Biochemistry

Paper – I : Chemistry of Biomolecules

Max. Marks: 80

Time : 3 Hours

PART – A (5 x 4 = 20 Marks)
(Short Answer Type)

Note : Answer any FIVE of the following questions.

- 1/ Give an account on biological importance of water.
- 2/ What is a buffer and how does it work?
- 3/ What is a storage polysaccharide?
- 4 Discuss about the role of glycosides in living organisms.
- 5 What are glycolipids?
- 6 Give an account on structure and properties of neutral fats.
- 7 What is a peptide bond?
- 8/ Give an account on classification of amino acids.

PART – B (4 x 15 = 60 Marks)
(Essay Answer Type)
Note: Attempt ALL the questions.

- 9/ (a) Derive Henderson-Hasselbalch equation and a note on its applications.
OR
(b) Discuss the stereochemistry of carbohydrates and amino acids.
- 10 (a) Write a note on reactions of monosaccharides with suitable examples.
OR
(b) Give an account on classification of carbohydrates.
- 11 (a) What is the composition of biomembranes? Write a note on fluid mosaic model.
OR
(b) Discuss about the reactions and properties of lipids.
- 12/ (a) Give an account on :
(i) classification of proteins
(ii) determination of amino acid composition of proteins
OR
(b) Give an account on chemical reactions of amino acids.