

B.Sc. (CBCS Pattern) Sem-II
011A - Biotechnology Paper-I : Biochemistry

P. Pages : 2

Time : Three Hours



GUG/W/22/11592

Max. Marks : 50

Notes : 1. All questions are compulsory and carry equal marks.

1. Discuss in detail various interaction between atoms and molecules. **10**

OR

a) Define pH add a note on isotonic solution. **2 ½**

b) Write a note on Normality and molarity. **2 ½**

c) Discuss in short concept of atom **2 ½**

d) What are Hypertonic and Hypotonic solutions. **2 ½**

2. Explain the structure of B-DNA add a note on deviation of A-DNA and Z-DNA from B-DNA. **10**

OR

a) Write a note on 'C' value and C-value paradox **2 ½**

b) Explain in brief about Telomere. **2 ½**

c) Explain the structure of t-RNA. **2 ½**

d) What are split gene? Explain with example. **2 ½**

3. Define carbohydrates, Explain in detail classification and nomenclature of carbohydrate. **10**

OR

a) Give the structure of Lactose and Maltose. **2 ½**

b) Give the significance of starch. **2 ½**

c) What are vitamin? Classify vitamin on the basis of solubility. **2 ½**

d) Write a note on Liposome. **2 ½**

4. What are amino acids? Give the classification of amino acids. **10**

OR

- a) Explain the primary structure of protein. 2 ½
- b) Write a note on Edman's degradation method for protein sequencing. 2 ½
- c) Write a note on Haemoglobin. 2 ½
- d) Discuss the β -pleated structure of protein 2 ½

5. Attempt **any ten** of the following

- a) Define Molality. 1
- b) What is diffusion. 1
- c) Define Buffer. 1
- d) Define Heterochromatin. 1
- e) What is exon? 1
- f) Write example of purine. 1
- g) Define Disaccharide. 1
- h) Name the sources of vitamin A. 1
- i) Give the example of unsaturated fatty acid. 1
- j) Give the significance of ninhydrin test. 1
- k) What is peptide bond? 1
- l) Give the example of tertiary structure of protein. 1
