

B.Sc. CBCS Pattern Semester-II  
**011A - Biotechnology Paper-I (Biochemistry)**

P. Pages : 2

Time : Three Hours



**GUG/W/23/11592**

Max. Marks : 50

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1. Define solute and solvent and explain different types of solution in detail. **10**

**OR**

Write a note on.

- a) Normality. **2½**
  - b) Osmosis. **2½**
  - c) Ionic bond. **2½**
  - d) Coordinate interaction. **2½**
2. Explain Watson and Crick model (B-DNA) and discuss its deviation in A and Z-DNA. **10**

**OR**

- a) Discuss structure of t-RNA. **2½**
  - b) Write the Chargaff's rule. **2½**
  - c) Write a note on split genes. **2½**
  - d) Write a note on cot curves. **2½**
3. Define carbohydrates and classify them. **10**

**OR**

Write a note on.

- a) Glycogen. **2½**
  - b) Sphingolipids. **2½**
  - c) Types of vitamins. **2½**
  - d) Steroids. **2½**
4. Describe secondary structure of protein in detail. **10**

**OR**

- a) Write a note on ninhydrin reaction. 2½
- b) Discuss primary structure of protein. 2½
- c) Explain structure of Hemoglobin. 2½
- d) Discuss bonds involved in tertiary structure of protein. 2½

**5. Solve any ten.**

- i) Define atom. 1
- ii) What is buffer? 1
- iii) What is covalent bond? 1
- iv) What is C-value paradox? 1
- v) What is euchromatin? 1
- vi) What is intron? 1
- vii) Draw structure of Lactose. 1
- viii) State any two functions of vitamins. 1
- ix) Give any two examples of Homopolysaccharide. 1
- x) Give examples of aromatic amino acids. 1
- xi) Draw antiparallel B sheet structure. 1
- xii) What is the function of myoglobin? 1

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