B.Sc. (CBCS Pattern) Semester-II

014A - Microbiology Paper-I - General Biochemistry

P. Pages : 2 **GUG/S/25/11588**

Time : Three Hours * 1 5 3 8 * Max. Marks : 50

---

1. Write in detail about different types of solution. **10**

OR

a) Write about positional isomer. **2½**

b) Describe the peptide bond. **2½**

c) Explain the structure of atom. **2½**

d) Describe the concept of molecule. **2½**

2. Write about different structural levels of proteins. **10**

OR

a) Explain the amphoteric nature of amino acid. **2½**

b) Explain the general structure of amino acids. **2½**

c) Classify the protein based on the sources. **2½**

d) Give the biological significance of proteins. **2½**

3. Explain the structure of starch and cellulose. **10**

OR

a) Write about classification of lipid. **2½**

b) Give the classification of carbohydrates. **2½**

c) Write about structure of maltose. **2½**

d) Explain the structure of cholesterol. **2½**

4. Describe the Watson-Crick model of DNA structure. **10**

OR

a) Write about structure of m-RNA. **2½**

b) Write about nucleoside and Nucleotide. **2½**

c) Describe the structure of t-RNA. **2½**

d) Describe the structure of r-RNA. **2½**

5. Answer **any ten** of the following (1 mark each) **10**

a) What is buffer?

b) What is the D and L isomer?

c) What is isotonic solution?

d) Give the example of sulphur containing amino acids?

e) What is Alpha helix?

f) Give the example of acidic amino acids?

g) Name the sugar present in raffinose?

h) Give the example of homopolysaccharide.

i) what is triglycerides?

j) What is nucleoside?

k) Name the type of ribosome present in bacteria?

l) Who discovered X ray crystallographic structure of DNA.

****