

**B.Sc. Semester-II Examination, 2022-23****MICROBIOLOGY [Honours]**

Course ID : 22211 Course Code : SH/MBC/201/C-3

Course Title : Biochemistry

[NEW &amp; OLD SYLLABUS]

Time : 1 Hour 15 Minutes Full Marks : 25

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.***UNIT-I**1. Answer any **five** of the following questions:

1×5=5

- What is buffer?
- Why phosphoenol pyruvate is important?
- What are aldoses? Give an example.
- What are cerebrosides?
- Name two aromatic amino acids.
- What do you mean by non-competitive inhibition of enzymes?
- Mention two importance of vitamin D.
- What do you mean by apoenzymes?

*[Turn Over]***UNIT-II**2. Answer any **two** of the following questions: 5×2=10

- Briefly describe the tetrahedron structure of water with suitable diagram. 5
- State second law of thermodynamics. Define  $G$ ,  $G^\circ$  and  $G^\circ'$ . 2+3
- Write short note on:  $2\frac{1}{2}+2\frac{1}{2}$ 
  - Lipid micelles
  - Alpha helix structure of protein
- Classify enzymes with one example from each group.  $2\frac{1}{2}+2\frac{1}{2}$

**UNIT-III**3. Answer any **one** of the following questions: 10×1=10

- What are carbohydrates? Explain the major classes of carbohydrates with suitable examples. What are non-reducing sugars? 2+6+2
- What are nucleotides? Distinguish between B-DNA and Z-DNA. Mention the sources and function of vitamin C. 2+4+(2+2)

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