

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

Course ID : 42212 Course Code : SH/MCB/402/C-9

Course Title : Environmental Microbiology

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 an ecosystem?
- Give an example of symbiotic microorganism.
- Define parasitism.
- Give an example of a bacterium associated with sulfur cycle.
- What is composting?
- Define MPN.
- What is COD?
- What are luminescent bacteria?

UNIT-II2. Answer any **two** of the following questions:

5×2=10

- Give an account of the diversity of microflora in fresh water and marine environment. 5
- What is ammonification? Briefly discuss the process of denitrification. 2+3
- Describe the process of microbial bioremediation of oils spills. 5
- What are methanogens? Briefly describe the rumen microbiome. 1+4

UNIT-III3. Answer any **one** of the following question:

10×1=10

- Write short notes on:
 - Microbial degradation of chitin
 - Nematophagus fungi. 5+5=10
- What are thermophilic, psychrophilic and halophilic microorganisms? Provide at least one example for each. Describe the characteristics of extremophiles that enable them to survive in extreme habitats.

3+3+4=10