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(Printed Pages 3)

(20425)

Roll No.

B.Sc. (Micro.)-III Year

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B.Sc. (Microbiology)

Examination, April-2025

MICROBIAL ECOLOGY

(B-307)

[B.Sc. (Micro.)]

Time : Three Hours]

[Maximum Marks : 50

Note : Attempt any **five** questions. **All** questions carry equal marks.

1. Define Microbial Interactions & describe each type with the help of examples. 10
2. What are the ecological implication of microbial antibiotic resistance in natural environments. 10

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3. Define nutrient cycling & its importance. Explain Nitrogen cycle in detail. 10
4. List various general & specific factors that will influence the microbial ecology of following : 10
 - (a) Terrestrial environment
 - (b) Aquatic environment
 - (c) Air
5. Explain how microbial symbiosis e.g. Mycorrhiza, Rhizobia etc. affect nutrient cycling in natural environments. 10
6. Define the impact of microbes on soil fertility & plant productivity. 10
7. What are the different kinds of sewage systems. Explain with the help of examples. 10
8. Differentiate b/w COD and BOD. & list various microbes in sewage. 10

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9. Explain in detail various types of Microbe-plant interaction with the help of examples. 10
10. In what ways do microbes contribute to the stability & resilience of ecosystem facing environmental stress (e.g. pollution, climate change). 10