

M.Sc. (Micro) Semester - 3 (CBCS) Examination
OCT/NOV-2024 (AS PER SYLLABUS YEAR JUNE-2024)
Ecology and Environmental Microbiology (Ele-1 (New-23))

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

Que.1 Answer briefly any seven of the following (2 Marks each) (14)

- (1) Name the key factors influencing primary productivity in terrestrial ecosystems.
- (2) How does deforestation impact biodiversity?
- (3) What is the greenhouse effect?
- (4) What is Biochemical Oxygen Demand (BOD)?
- (5) What are the environmental factors affecting the success of bioremediation?
- (6) What is biostimulation?
- (7) What are the environmental benefits of using biosurfactants?
- (8) What are the advantages of biofuels produced from waste compared to conventional fuels?

Que.2 Answer any two of the following (7 Marks each) (14)

- (A) Write a short note on carbon cycling.
- (B) Explain the structure and function of the aquatic ecosystem of India
- (C) Discuss major successes and failures of conservation projects in India.

Que.3 Answer any two of the following (7 Marks each) (14)

- (A) Write a short note on some effective methods for treating wastewater.
- (B) Explain global environmental problems.
- (C) Describe the key techniques employed in environmental monitoring.

Que.4 Answer any two of the following questions (7 Marks each) (14)

- (A) Write a short note on treatment requirements for dairy and distillery effluents.
- (B) Explain the challenges and prospects of integrated municipal and biomedical waste management.
- (C) Describe the bioremediation of xenobiotics.

Que.5 Answer any two of the following questions (7 Marks each) (14)

- (A) Write a note on the technological advancements in enhancing biomass and biogas production from diverse feedstocks.
- (B) Explain the potential benefits and risks associated with genetically modified organisms (GMOs).
- (C) Discuss the potential of biofertilizers and biopesticides in promoting sustainable agriculture.
