

**M.Sc. (ENVIRONMENTAL SCIENCE)
(MSCENV)**

Term-End Examination

June, 2022

MEVE-013 : ENVIRONMENTAL BIOTECHNOLOGY

Time : 3 hours

Maximum Marks : 100

Note : Answer any **ten** questions. All the questions carry equal marks.

1. Describe the scope of environmental biotechnology for environmental clean-up. 10

2. Write short notes on any **two** of the following : 2×5=10
 - (a) Bioreactors for wastewater treatments
 - (b) Biopesticides
 - (c) Bioplastics
 - (d) Biodegradation of natural compounds

3. What is Solid Waste Management ? Describe composting and vermicomposting in detail. 10

4. Describe biological methods for wastewater treatment. 10

5. Describe various methods to control air pollution. Explain the advantages and limitations of each technique. 10
6. What is ex-situ bioremediation ? Describe any two methods in detail. 10
7. What are hazardous wastes ? Give treatment technologies of hazardous waste. 10
8. Describe in detail various phytoremediation techniques, their application and scope. 10
9. What are biomarkers ? Describe the role of biomarkers in environmental monitoring and pollution control. 10
10. What are xenobiotic compounds ? Describe in-situ bioremediation techniques for the treatment of xenobiotic compounds. 10
11. Discuss the potential of waste as a source of energy in future. 10
12. Give a detailed account of types of biofertilizers and their applications with suitable examples. 10
13. What is biomining ? Describe the process of extraction of metals from ore. 10
14. What is biopesticide ? Describe application of biopesticides with suitable examples. 10
