

(i) Printed Pages : 2

Roll No. ....

(ii) Questions : 9

Sub. Code :

3	4	7	5
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Exam. Code :

0	4	3	6
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M.Sc. Bio-Technology 2<sup>nd</sup> Semester

(2054)

## ENVIRONMENTAL BIOTECHNOLOGY

Paper : MBIO-204

Time Allowed : Three Hours]

[Maximum Marks : 80

**Note :—** Attempt *five* questions in all. Question No. 1 is compulsory.  
Select *one* question from each unit. All questions carry equal marks.

1. (a) Define Photochemical smog.
  - (b) What is Composting ?
  - (c) Give names of aerobes involved in secondary wastewater treatment.
  - (d) What are Bioindicators ?
  - (e) What is COD ? How is it significant ?
  - (f) What are bioplastics ? Give examples.
  - (g) Define Sanitary landfills.
  - (h) What are Xenobiotics ?
- 2×8=16

### UNIT—I

2. (a) How is Air Quality monitored ? Discuss. 8
- (b) Discuss methods to measure Noise Pollution. 8

3. (a) Discuss the fate of pesticides in soil. 8
- (b) Discuss methods for bacteriological analysis of Soil. 8

### UNIT—II

4. Elaborate on design and working of UASBR for wastewater treatment. 16
5. Describe effluent characteristics and treatment strategies for Tanneries and Distilleries. 16

### UNIT—III

6. (a) List factors contributing to Recalcitrance of Xenobiotics. 6
- (b) Deliberate on Microbial degradation of Complex Hydrocarbons in the environment. 10
7. (a) Elaborate on the principle and methodology of Integrated Pest Management. 10
- (b) Write a note on Ecological Considerations of Xenobiotics. 6

### UNIT—IV

8. (a) Discuss the characteristics and composition of Municipal Solid Waste. 10
- (b) Write a note on Bioleaching. 6
9. (a) What is the principle of Remote sensing and GIS ? Discuss application in Ecological mapping. 8
- (b) What are Bioplastics ? Discuss environmental significance and properties. 8