

(i) Printed Pages: 3

Roll No.

(ii) Questions : 9 Sub. Code :

1	7	9	8	2
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Exam. Code :

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B.Sc. (Hons.) Biotechnology 5th Semester
(2124)

ENVIRONMENTAL BIOTECHNOLOGY

Paper : BIOT-502-T

Time Allowed : Three Hours] [Maximum Marks : 67

Note :—Attempt **FIVE** questions in all, including Q. No. 1 which is compulsory and selecting **ONE** question from each unit. All questions carry equal marks except compulsory question.

1. Explain the following :

- (a) Define pollution and pollutant.
- (b) Solar energy as modern fuel.
- (c) Fertilizers as soil pollutant.
- (d) Waste and waste management.
- (e) Azolla as Biofertilizer.
- (f) Activated sludge.
- (g) Chemical oxygen demand.

(h) Lichen as bioindicator.

(i) Necessity of IPM.

(j) Types of solid waste.

$1\frac{1}{2} \times 10 = 15$

UNIT—I

2. (a) Define Air Pollution. Describe various effects of air pollution on human health and materials.
- (b) Describe various sources and effects of noise pollution on human health. 7,6
3. (a) Tabulate difference between renewable and non renewable energy sources. Describe in brief the impacts of fossil fuels on environment.
- (b) Discuss Hydrogen as modern fuel and its positive impacts on environment. 7,6

UNIT—II

4. (a) What is Water Pollution ? Explain different physico-chemical methods for measurement of water pollution.
- (b) Discuss in detail the process of Trickling filter. 7,6
5. (a) Describe design and functioning of Upward Flow Anaerobic Sludge Blanket reactor.
- (b) Explain Activated Sludge methods of waste water treatment. 7,6

UNIT—III

6. (a) What are Bio-fertilizers ? Describe Rhizobium and green manure as bio-fertilizers.
- (b) Give an account on biodegradation of pesticides. 7,6

7. (a) What is Integrated Pest Management ? Discuss role of resistant plant variety and microbial control in IPM.
- (b) Explain in brief biodegradation of Azo dye. 7,6

UNIT—IV

8. (a) Define waste and solid waste management. Explain management of municipal solid waste.
- (b) Describe in brief the process of Vermicomposting as a method of waste treatment. 7,6
9. Define Bio-indicators. Describe various types of bio-indicators for detection of environmental pollution with suitable examples.

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