

Roll No. :

Total No. of Questions : 11]

[Total No. of Printed Pages : 3

BFMS-461

M.Sc. (Final) Examination, 2023

BIOTECHNOLOGY

Paper - VI

(Environmental Biotechnology)

Time : 3 Hours]

[Maximum Marks : 75

Section-A

(Marks : 2 × 10 = 20)

Note :- Answer all *ten* questions (Answer limit **50** words). Each question carries **2** marks.

Section-B

(Marks : 5 × 5 = 25)

Note :- Answer all *five* questions. Each question has internal choice (Answer limit **200** words). Each question carries **5** marks.

Section-C

(Marks : 10 × 3 = 30)

Note :- Answer any *three* questions out of five (Answer limit **500** words). Each question carries **10** marks.

Section-A

1. (i) Define Acid Rain.
- (ii) What do you mean by Greenhouse Effect ?

BRI-343

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BFMS-461 P.T.O.

- (iii) Define Sedimentation.
- (iv) Write examples of any *two* aerobic treatment processes used in waste water treatment.
- (v) What is the composition of Bio-gas ?
- (vi) What is Bio-accumulation ?
- (vii) Give examples of any *two* Bio-insecticides.
- (viii) Define Bio-mining.
- (ix) What is Gene Probe ?
- (x) Define Bio-remediation.

Section–B

2. Write short note on Global Warming.

Or

Give brief account of biological control of Water Pollution.

3. Draw schematic flow chart of waste water treatment.

Or

Write short note on treatment of waste water with particular reference to sugar industries.

4. What do you mean by Hazardous Waste ? Write short note on it.

Or

What is Bio-scrubbing ? Throw light on it with suitable examples.

5. What do you mean by Biosensors ? Describe applications of biosensors for detection of environmental pollutants.

Or

What are Xenobiotics ? Write short note on degradation of xenobiotics.

6. What are GEMS ? Explain the role of GEMS in Bio-remediation.

Or

What are PCBs ? How it may adversely affect the environment ?

Section–C

7. What is Water Pollution ? What are the major sources of water pollution ? Describe the need for water management in present scenario.
8. What do you mean by Waste Water ? Give detailed account on different aerobic treatment processes for waste water treatment.
9. Describe scopes, applications and concept of cleaner technologies with special reference to the solid waste management.
10. What are Bio-fertilizers ? How can they boost the crop productivity ? Explain it with suitable examples.
11. Write notes on the following
- (a) Nah-operon
 - (b) Micro-Electromechanical System (MEMS)