

B.Sc. (CBCS Pattern) Semester-VI
BIO1 - Biotechnology Paper-I : Environmental Biotechnology

P. Pages : 2

Time : Three Hours



GUG/W/24/13323

Max. Marks : 50

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- Notes : 1. All questions are compulsory and carry equal marks.
2. Draw neat labelled diagrams wherever necessary.

1. Give detail account on various types of water pollutants. **10**

OR

- a) Give an account on green house effect. **2½**
- b) Explain concept of eutrophication. **2½**
- c) Write a note on acid rain. **2½**
- d) Give an account on ozone depletion. **2½**

2. Discuss activated sludge and trickling filter method of waste water treatment in detail. **10**

OR

- a) Discuss concept of BOD. **2½**
- b) Give composition and types of waste water. **2½**
- c) Write a note on oxidation pond. **2½**
- d) Discuss the treatment scheme of sugar industry. **2½**

3. Discuss in details biodegradation of xenobiotic compound? **10**

OR

- a) Explain the process of Bioaccumulation. **2½**
- b) Describe the advantages and disadvantages of Bioleaching. **2½**
- c) Explain various types of xenobiotic compound. **2½**
- d) Describe the role of degradative plasmid in biodegradation. **2½**

4. What is Biofertilizer? Discuss its various types. 10

OR

- a) What is integrated pest management? Explain it? 2½
- b) Write a note on fungal biofertilizer. 2½
- c) Explain the role of r-DNA technology in nitrogen fixation. 2½
- d) Describe carbon cycle in details. 2½

5. Solve **any ten** of the following.

- a) Write any two radioactive water pollutants. 1
- b) What is need of environmental education. 1
- c) Give any two sources of air pollution. 1
- d) Define COD. 1
- e) What is anaerobic digester? 1
- f) What is the use of Rotating Biological contactor? 1
- g) What is Biomagnification? 1
- h) Give any two examples of xenobiotic compound. 1
- i) Give any two example of Biopesticides. 1
- j) What is symbiotic N₂ fixation? 1
- k) Enlist two bacterial species used for preparation of Biofertilizers. 1
- l) Define Biopesticide. 1
