

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

P. Pages : 2

Time : Three Hours



**GUG/S/23/13323**

Max. Marks : 50

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Notes : 1. All questions are compulsory.

**1.** Discuss in detail about air pollution. **10**

**OR**

a) Write a note on eutrophication. **2½**

b) Give an account on acid rain. **2½**

c) Discuss in brief about ozone depletion. **2½**

d) Explain about radioactive pollutants of water pollution. **2½**

**2.** Explain various types of wastewater treatment. **10**

**OR**

a) Write a note on BOD. **2½**

b) Give brief account on treatment scheme of sugar industries wastes. **2½**

c) Write a note on oxidation pond. **2½**

d) Give the flowsheet diagram of wastewater treatment. **2½**

**3.** Discuss in detail about the bioleaching of copper and its advantages and disadvantages. **10**

**OR**

a) Describe various types of xenobiotics. **2½**

b) Write a note on biomagnification. **2½**

c) Discuss about biodegradation of hydrocarbons. **2½**

d) Discuss about bioaccumulation. **2½**

4. Discuss about biofertilizers with its various types in detail. 10

OR

- a) Explain about biogeochemical cycle with respect to carbon. 2½
- b) Discuss alcohol as a biofuel. 2½
- c) Discuss the role of nif gene in nitrogen fixation. 2½
- d) Write a note on integrated pest management. 2½

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

- a) Give the example of any two greenhouse gases. 1
- b) What is ozone gas? 1
- c) Enlist any two radioactive water pollutants. 1
- d) What is COD? 1
- e) Give the composition of wastewater. 1
- f) What is activated sludge? 1
- g) What is surfactant? 1
- h) Enlist any two xenobiotic compounds. 1
- i) What is degradative plasmid? 1
- j) What is symbiotic nitrogen fixation? 1
- k) Give the full form of VAM. 1
- l) Give the examples of nitrogen fixing bacteria. 1

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