CBCS SCHEME

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18BT821

Eighth Semester B.E. Degree Examination, Dec.2024/Jan.2025
Environmental Biotechnology

Time: 3 hrs. Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. Elaborate on the effects of air pollution on living and non-living systems in detail. **(10 Marks)**

b. Discuss the sources of air and soil pollution. **(10 Marks)**

OR

2 a. List the different sources of heavy metal pollution. Discuss the effects of different heavy metals on the environments. **(10 Marks)**

b. Elaborate on the factors which affect the bioaccumulation process. **(10 Marks)**

Module-2

3 a. Explain with a neat diagram, activated sludge process and its working. **(10 Marks)**

b. Elaborate on the waste water treatment process of food processing industries taking vegetable oil industry as an example. **(10 Marks)**

OR

4 a. Describe the various stages involved in anaerobic digestion. **(10 Marks)**

b. Write short notes on : (i) BOD (ii) COD **(10 Marks)**

Module-3

5 a. Elaborate on different methods of water conservation. Add a note on watershed management. **(10 Marks)**

b. Elaborate on the major problems and concern related to resettlement and rehabilitation of people. **(10 Marks)**

OR

6 a. Write short notes on :
(i) Global warming (ii) Ozone layer depletion **(10 Marks)**

b. Define wasteland reclamation. Explain different methods of wasteland reclamation. **(10 Marks)**

Module-4

7 a. Explain in detail modern agriculture and its impact on the environment. **(10 Marks)**

b. Write short notes on :
i) World food problems
ii) Renewable and non-renewable energy sources **(10 Marks)**

OR

8 a. What is soil erosion? Explain cause and effect of soil erosion. **(10 Marks)**

b. Write short notes on :
i) Alternate Energy
ii) Biofuels **(10 Marks)**

Module-5

9 a. Differentiate between Direct and Indirect bioleaching. **(10 Marks)**

b. Discuss the bacterial oxidation of Chalcopyrite and Pyrite. **(10 Marks)**

OR

10 a. Discuss the role of genetically engineered microorganisms for field biodegradation of hazardous materials. **(10 Marks)**

b. Explain the process of microbial desulfurization of coal. **(10 Marks)**

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