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Reg. No. : .....

Name : .....

**Fourth Semester M.Sc. Degree Examination, July 2024**

**Biotechnology**

**BT 402 : ENVIRONMENTAL BIOTECHNOLOGY**

**(2018 Admission Onwards)**

Time : 3 Hours

Max. Marks : 75

**SECTION – A**

I. Answer **any two** of the following :

1. Differentiate between *In situ* and *Ex situ* bioremediation and add a note on the advantages and limitations of *In situ* hybridization.
2. Write in detail about reverse osmosis and electro dialysis based waste water treatment.
3. “Advantages and disadvantages of using microbes in recovery of oil from oil spills -Discuss.

**(2 × 15 = 30 Marks)**

**SECTION – B**

II. Answer **any nine** of the following :

4. What are organic pollutants? Mention the types of organic pollutants?
5. Briefly describe the methods for measuring noise pollution.
6. Suggest a method for the determination of BOD in waste water.

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7. Analyze the advantages of enzymatic treatment of waste water over other methods?
8. What are oxidation ditches? Mention its significance.
9. Write down the key steps in the composting and mention its significance.
10. What is the working principle of upflow anaerobic sludge blanket reactor.
11. What are Biofilms? Mention its relevance in microbial survival?
12. Differentiate between Biostimulation and Bioaugmentation?
13. Discuss how genetically Modified Organisms can be used in bioremediation.
14. Illustrate the steps involved in bio-desulfurization of coal.
15. What are Biopesticides? Mention its advantages over chemical pesticides?

**(9 × 5 = 45 Marks)**

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