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MEVE–13

M. Sc. (ENVIRONMENTAL SCIENCE) (MSCENV)

Term-End Examination

December, 2023

MEVE-13 : ENVIRONMENTAL BIOTECHNOLOGY

Time : 3 Hours *Maximum Marks : 100*

Note : *(i) Answer any **ten** questions.*

(ii) All questions carry equal marks.

1. Describe the applications of environmental biotechnology in environmental cleanup processes. 10

2. Explain *in situ* bioremediation of contaminants in soil. 10

3. Differentiate between aerobic and anaerobic biodegradation. 10

4. What are biopesticides ? Explain the different types of biopesticides. 10

5. Define phytoremediation. Describe its types and applications. 10

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6. Explain the process of biotransformation, biosorption and bioaccumulation. 10

7. What is bioremediation ? Give its scope, advantages and limitations. 10

8. What is bioneass ? How can it be converted into bioenergy ? 10

9. What is environmental monitoring ? Discuss the role of biomarkers in environmental monitoring. 10

10. Write short notes on the following : 10

    (a) Landfills

    (b) Vermicomposting

11. Describe the role of microbes in various environmental biotechnological processes. 10

12. Describe activated sludge and trickling filter process of waste water treatment. 10

13. What are xenebiotic compounds ? Describe the degradation mechanism. 10

14. What are the different sources and types of waste ? Describe the waste management hierarchy. 10