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MEVE-013

**M. Sc. (ENVIRONMENTAL SCIENCE)
(MSCENV)**

Term-End Examination

December, 2022

MEVE-013 : ENVIRONMENTAL BIOTECHNOLOGY

Time : 3 Hours

Maximum Marks : 100

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

(ii) All questions carry equal marks.

1. Define Environmental Biotechnology. Describe its scope and applications. 10
2. What is waste ? Describe various types of waste and their composition. 10
3. Elaborate the role of environmental biotechnology in municipal solid waste treatment. 10

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4. Describe biological treatment technologies for waste water treatment. 10
5. Describe various types of biofertilizers and their application for soil improvement. 10
6. What is biodegradation ? Describe biodegradation of natural compounds. 10
7. Give treatment technologies for xenobiotic compounds. 10
8. Describe the problems caused by plastic waste. How are bioplastics useful for environment ? 10
9. What are biomarkers ? Describe the role of biomarkers in environmental monitoring. 10
10. What is air pollution ? Describe how biotechnology can be used for the air pollution control and management. 10

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11. Describe *ex-situ* bioremediation techniques and their advantages and limitations. 10
12. What is phytoremediation ? Give any *three* techniques of phytoremediation and their advantages. 10
13. Describe biobleaching and biomining. Give the advantages and limitation of techniques. 10
14. What are plant growth promoting rhizobacteria ? Describe the role of biotechnology in insect/pest management. 10

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