

Roll No.

Total Pages : 2

CMDE/M-24

4689

ENVIRONMENTAL METHODS AND ANALYTICAL TECHNIQUES

Paper–MES–204

Time Allowed : 3 Hours]

[Maximum Marks : 80

Note : Attempt **five** questions in all, selecting **one** question from each Unit. Question No. **1** is compulsory. All questions carry equal marks.

Compulsory Question

1. Write short notes on the following : 4×4=16
- (a) Primary Production.
 - (b) Estimation of Microbial biomass.
 - (c) Fluorometry.
 - (d) Water quality parameters.

UNIT–I

2. Explain the characteristics of Vegetation. Give a short description of various methods of Vegetation analysis. 16
3. Describe in detail the Methodology for germplasm evaluation and conservation. 16

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UNIT–II

4. What are the common techniques used for Soil microbial population analysis? 16
5. Explain the process of Nitrogen mineralization and its significance in Soil ecosystems. 16

UNIT–III

6. Explain the Beer-Lambert Law and its significance in Spectrophotometry. What are some common applications of Spectrophotometry in Environmental science? 16
7. Explain the principle and application of the following :
- (a) TLC. 8
 - (b) HPLC. 8

UNIT–IV

8. Describe the following :
- (a) Importance and frequency of Sampling in monitoring Air quality. 8
 - (b) Process of Collecting samples for analysis of PM in Air. 8
9. Describe the standard methods for the detection and enumeration of indicator bacteria in water. 16

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2