

3. Discuss the following (any **three**) (5×3=15)

- (i) Bioindicators for Environmental Monitoring
- (ii) Role of Macrophytes in Wetland Restoration
- (iii) Phytoremediation techniques
- (iv) Role of Arbuscular Mycorrhizal Fungi in Restoration of Degraded Lands

4. (a) What is Ecosystem Degradation? Discuss the influence of climate change on Ecosystem Degradation. (7.5)

(b) Explain the role of natural and anthropogenic factors in degradation of soil and water. (7.5)

5. (a) Discuss the magnitude/scale of degradation of various ecosystems globally. (7.5)

(b) How does agroforestry help in the rehabilitation of degraded land in India? (7.5)

[This question paper contains 4 printed pages.]

**Your Roll No.....**

**Sr. No. of Question Paper : 4640**

**J**

Unique Paper Code : 2164002007

Name of the Paper : Environmental Monitoring  
and Ecosystem Restoration

Name of the Course : **Generic Elective: Botany**

Semester : IV

Duration : 2 Hours

Maximum Marks : 60

**Instructions for Candidates**

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt **four** questions in all including Question No.1 which is compulsory.
3. **All** parts of questions must be answered together.
4. **All** Questions carry equal marks.

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1. This Question contains three parts :

(a) Define the following (any five) (1×5=5)

- (i) Particulate Matter
- (ii) Phytoremediation
- (iii) Landfills
- (iv) Water Hardness
- (v) Air Quality Index
- (vi) Ecosystem Restoration

(b) Write True or False : (1×5=5)

- (i) Ecological restoration applies only to forest ecosystem.
- (ii) The Paris Agreement proposed to keep the increase in global average temperature to well below 2°C above pre-industrial levels.
- (iii) The attempt to rebuild a community into a functioning system which may differ from the original condition is known as Rehabilitation

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(iv) PM<sub>10</sub> is considered to be more toxic than PM<sub>2.5</sub>

(v) Acidic soils tend to be high in calcium and magnesium salts.

(c) Match the following : (1×5=5)

Column A

Column B

- |                         |                            |
|-------------------------|----------------------------|
| (i) Soil salinity       | Ocean temperature          |
| (ii) Ground-level ozone | Moderate tolerance         |
| (iii) Bioindicators     | High evaporation rate      |
| (iv) Coral bleaching    | Contaminated water         |
| (v) Rhizofiltration     | Volatile organic compounds |

2. Write short notes on of the following (any three) (5×3=15)

- (i) Bradshaw's Concept of Ecosystem Restoration
- (ii) Joint Forest Management (JFM)
- (iii) Sustainable Development Goals
- (iv) Peatland Degradation

P.T.O.