PG Even Semester Exam, 2023

Ecology & Environmental Science

2nd Semester

COURSE NO. ECGCC-202

[Forest Ecology]

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

Answer five questions, taking one from each Unit

UNIT-I

1. Define forest microclimate. Describe the influence of forest types on microclimate. Explain the role of physical environmental factors in determining the forest structure. 2+6+6=14

2. Enumerate the characteristics of tropical forest trees. Explain the vertical stratification in tropical forests with illustrations. Highlight the plant adaptations in tropical forest. 2+8+4=14

UNIT-II

3. Define seed dormancy. Describe the different types of seed dormancy in tropical forest trees. State the biological significance of seed dormancy in tropical plants. 2+10+2=14

4. What is shoot growth? Elucidate the various types of shoots and its growth pattern. Describe shoot growth patterns in tropical forest. 2+9+3=14

UNIT-III

5. Describe the nutrient cycling and nutrient conservation strategies in tropical forests. 14

6. Write note on : 7x2=14

   a. Biomass estimation models

   b. Factors affecting plant litter production and decomposition

UNIT-IV

7. What do you understand by sustainable forest management? Name the various techniques of assessing sustainable forest management. Discuss the criteria-indicator technique in detail. 2+4+8=14

8. Write short notes on the following: 7x2=14

   a. Forest Stewardship Council

   b. Joint forest management

UNIT-V

9. What is the Green India Mission (GIM)? Explain the primary objectives of GIM. Discuss the challenges of GIM in achievement of its goals. 3+5+6=14

10. Write notes on : 7x2=14

    a. Urban forestry.

    b. Nature of damage and management practices of leaf skeletonizer of *Tectona grandis.*

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