PG Even Semester Examination, May 2025

ECOLOGY & ENVIRONMENTAL SCIENCE

4th Semester

Course No. : ECG - 653 (EL-B)

(Biodiversity Conservation)

Full Marks : 70

Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

(Answer any five questions, selecting one from each unit)

Unit - I

1. Define Natural Extinction. Give an account on the extinction of species highlighting the extinction vulnerability among species and the implication of extinction. State the measures that can be used to minimize the extinction risk. 2+9+3=14

2. What is the importance of Conservation of Biodiversity? Write elaborately on the varius types of 'In-situ' and 'Ex-situ' conservation. Mention the differences between 'Utilitarian' and 'Intrinsic' values of Biodiversity. 2+9+3=14

(Turn Over)

Unit - II

3. Define Ecosystem services. What are the various goods and services provided by an ecosystem? Describe the role of ecosystem services in relation to ecosystem functioning. 2+3+9=14

4. a) 'Climate change in posing a major threat for the survival of 'Biota' - Justify the statement citing examples from the global and national scenario. 9

   b) Write a brief note on 'Public awareness and nature camps'. 5

Unit - III

5. 'The male sloth travels a long distance only to discover that the lone female sloth is already with a baby and hence not ready to mate'.

   - Keeping this situation as the backdrop, discuss the relevance of metapopulations in species extinction.

   You answer should include the phenomena of dispersal, emigration, immigration, rescue effects and source-sink populations.

   Add a brief note on the difference between a population and metapopulation. 11+3=14

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

   a) Biodiversity Management Committee (BMC) and the People's Biodiversity Register (PBR)

   b) Ecological Sensitive Zones (ESZs)

Unit - IV

7. Define invasive alien species. Describe the process of biological invasion with appropriate illustrations. State the different measures adopted to control alien invasions. 2+9+3=14

8. Discuss the major issues of Biodiversity Conservation in Barak Valley. Add a short note on the prospects of Biodiversity Conservation in the valley. 8+6=14

Unit - V

9. Define Traditional Knowledge. Describe the role of ethnobotany in the conservation of plant genetic resources. 2+12=14

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

    a) Ethnobotanical studies in Northeast India

    b) Traditional ethics and plant conservation

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