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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PG Even Semester Examination, May 2025

ECOLOGY & ENVIRONMENTAL SCIENCE

4th Semester

Course No. : ECG - 653

Full Marks : 70

Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

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

(Human Ecology and Environmental Ethics)

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

Unit - I

1. What do you mean by doubling time in human population growth? Critically analyze the Malthus theory of population growth highlighting the fallacies of the concept in the modern context. 2+6+6=14

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

    a) Mortality

    b) Population policy and family welfare

Unit - II

3. Define tribe. Write in details about the land tenure system in tribal areas with special reference to N.E. India. 2+12=14

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

   a) Impact of industrialization on the tribal population in India.

   b) Land alienation due to urbanization.

Unit - III

5. State the factors that led to the adoption of various water harvesting systems prevalent in different regions of India. 14

6. Describe briefly about rural settlement. Discuss about the types and pattern of rural settlements. Write a note on the factors affecting the location of rural settlements. 2+6+6=14

Unit - IV

7. What are the ecological effects of urbanization? 'Cities as sustainable ecosystem' - Discuss. Write a note on ecological footprint of cities. 3+7+4=14

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

(Turn Over)

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

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

8. What do you mean by urbanization? Discuss briefly with suitable diagrammatic illustrations, various theories and models related to urban pattern and structures. 2+12=14

Unit - V

9. Define ecocentrism. Explain the role of ecocentric views of indigenous communities in maintaining biodiversity. 6+8=14

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

    a) Biocentrism

    b) Anthropocentrism

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

(Biodiversity Conservation)

(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