

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 1059

I

Unique Paper Code : 2182013501

Name of the Paper : Biodiversity and Conservation
(DSCC-13)

Name of the Course : **B.Sc. (H) Environmental
Sciences**

Semester : V

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. Answer any **four** questions.
3. **All** questions carry equal marks.

1. (a) Analyze the impact of habitat fragmentation on biodiversity patterns. Discuss both positive and negative effects. (8)

P.T.O.

- (b) Define speciation, outline its types, and explain its role in generating biodiversity. (7)

2. Write short notes on the following (**any three**):

(5×3=15)

- (a) Latitudinal trends in biodiversity.
- (b) RAPD and its application in biodiversity studies.
- (c) Ecosystem services related to nutrient cycling.
- (d) The role of remote sensing in biodiversity conservation.

3. Differentiate between the following (**any three**):

(5×3=15)

- (a) Alpha diversity and Beta diversity
- (b) In-situ and Ex-situ conservation methods
- (c) Ethical and economic values of biodiversity

(d) Phytogeographic zones and Zoogeographic zones of India

4. (a) Synthesize information from biodiversity hotspots and IUCN Red List guidelines to create a comprehensive framework for species conservation. (8)

(b) List the steps of sampling strategies for floristic diversity and explain precautions to ensure reliable results. (7)

5. (a) Define Intermediate Disturbance Hypothesis and explain its role in maintaining biodiversity. Include relevant examples. (8)

(b) Analyze the relationship between deforestation and hydropower development in India's biodiversity context. (7)

6. Evaluate the effectiveness of biosphere reserves in addressing biodiversity conservation goals. Support your arguments with examples from India.

(15)