

U.G. 6th Semester Examination-2025**BOTANY****[HONOURS]****Discipline Specific Elective (DSE)****Course Code : BOT-H-DSE-T-03A****(Biodiversity and Conservation)**

Full Marks : 40

Time : 2½ Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Answer any five from the following: 2×5=10
- a) Define biodiversity. What are the three levels of biodiversity?
 - b) What is an endemic species? Provide an example.
 - c) What are main causes of soil degradation?
 - d) Explain the term "biodiversity hotspot". Name any two biodiversity hotspot in India.
 - e) What are the consideration of Intellectual Property Regime?
 - f) What is the importance of gene banks in biodiversity conservation?

[Turn Over]

g) What is genetic erosion?

h) What is the significance of waste management?

2. Answer any two of the following: $5 \times 2 = 10$

a) Define Forest cover. What is the significance of Forest conservation act (1980)? Name two major forest types found in India. $1+3+1$

b) What is an ecological footprint? Discuss its components with special emphasis on carbon footprint. How can reducing carbon footprint contribute to biodiversity conservation? $1+3+1$

c) Differentiate between *in-situ* and *ex-situ* conservation. Give two examples of each and discuss their significance in biodiversity conservation. $1+2+2$

d) What do you mean by bioprospecting? Differentiate between major and minor forest products. $3+2$

3. Answer any two of the following: $10 \times 2 = 20$

a) Describe in brief the different types of water resources—freshwater, marine, estuarine, and wetlands with examples. Discuss the major threats to these ecosystems and outline effective management strategies for their conservation.

$5+2\frac{1}{2}+2\frac{1}{2}$

b) What do you understand by sustainable utilization? Discuss on the different approaches for its sustainability. $2+8$

c) What is meant by agricultural and pastoral land utilization? Describe the causes and management practices for soil degradation. $4+3+3$

d) Write a brief note on Biological Diversity act (2002). Mention the significance of biodiversity. Describe the major threats and management strategies to conserve the biodiversity.

$2+2+3+3$