


VIT

Vellore Institute of Technology

Final Assessment Test – November 2025

Course: TBIT403L - Biodiversity and Conservation Biology

Class NBR(s): 1081

Slot: D1+TD1

Time: Three Hours

Max. Marks: 100

- KEEPING MOBILE PHONE/ANY ELECTRONIC GADGETS, EVEN IN 'OFF' POSITION IS TREATED AS EXAM MALPRACTICE
- DON'T WRITE ANYTHING ON THE QUESTION PAPER

COs	CO Statements
CO1	Illustrate values of biodiversity.
CO2	Summarize genetic diversity and factors causing loss of genetic diversity.
CO3	Discover species richness and maintain inventory.
CO4	Classify various ecosystem types and manage biodiversity.
CO5	Examine process of evolution and various factors that govern population.
CO6	Identify possible measures to overcome species extension and loss of ecosystem.

BL – Blooms Taxonomy Level (1 – Remember, 2 – Understand, 3 – Apply, 4 – Analyse, 5 – Evaluate, 6 – Create)

Answer ALL Questions

(10 X 10 = 100 Marks)

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| 1. | Explain how the erosion of traditional knowledge and the push for development can harm ecosystems? | CO1 | BL3 |
| 2. | Explain the three levels of genetic diversity – within individuals, among individuals, and among populations? | CO2 | BL1 |
| 3. | Explain the origin of genetic variation through the sexual cycle. Describe the mechanisms such as crossing over, independent assortment, recombination, and random fertilization with suitable examples? | CO2 | BL4 |
| 4. | Describe the following categories of species with suitable examples:
(i) Vulnerable, (ii) Threatened, (iii) Endangered, and (iv) Extinct? | CO3 | BL4 |
| 5. | Explain the freshwater and wetland ecosystems, highlighting their features and significance. | CO3 | BL3 |
| 6. | Describe the desert ecosystem, its types, unique features, climatic conditions, adaptations of flora and fauna, and ecological significance. | CO3 | BL1 |
| 7. | Explain the concept of circular economy in detail. Discuss how it contributes to sustainable resource management, reduces waste, promotes recycling and reuse, and supports environmental and economic sustainability with suitable examples? | CO3 | BL2 |

8. Biodiversity loss has always existed, but the threat becomes critical when the rate of extinction exceeds the rate of speciation. Explain this statement with examples? **CO5 BL3**

9.a) Explain the importance of conserving biodiversity. Discuss its ecological, economic, and cultural significance, along with the potential consequences of biodiversity loss? **CO5 BL3**

OR

9.b) Explain the consequences of climate change on the environment, biodiversity, and human society. Discuss the strategies and measures to mitigate and control its impacts? **CO5 BL4**

10.a) Why mangrove ecosystem is unique; add its types and their ecological importance? **CO6 BL1**

OR

10.b) Explain plant diversity, highlighting its types, significance in ecosystems, and the factors affecting the distribution and richness of plant species. **CO6 BL1**

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