

**SL No of QP 9871**

Unique Paper Code : 2163010010  
Name of the Paper : Biodiversity Informatics  
Name of the Course : B. Sc. (Hons.) Botany  
Semester : VII  
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. Attempt **four** Questions in all.
3. Question No. 1 is compulsory.
4. Attempt all parts of a question together.
5. Draw diagrams wherever necessary.

1. (a) Define the following (**any five**) **1×5**  
(i) Geological Time Scale  
(ii) Ecosystem  
(iii) Species Diversity  
(iv) Coral Bleaching  
(v) Gene Bank  
(vi) Red Data Book  
(vii) Simulations
- (b) Expand the following (**any five**) **1×5**  
(i) NBPGR  
(ii) IUCN  
(iii) IPR  
(iv) CBD  
(v) GIS  
(vi) RS  
(vii) CE
- (c) Match the following **1×5**  
(i) National park  
(ii) Gene bank  
(iii) Biodiversity hotspot  
(iv) Species Diversity  
(v) Red list
- (a) Western Ghats  
(b) IUCN  
(c) Richness and Evenness  
(d) Kaziranga  
(e) Online resource

2. Differentiate between the following (any five) 3×5

- (i) Shannon vs. Simpson's Indices
- (ii) National Parks vs. Wildlife Sanctuaries
- (iii) Mesozoic vs. Cenozoic era
- (iv) Latitudinal vs. Insular gradient of biodiversity
- (v) Natural vs Anthropogenic biodiversity loss
- (vi) Remote sensing vs. GIS

3. Write notes on the following (any three) 5×3

- (i) Coral reefs and their significance
- (ii) Measures of Species diversity
- (iii) Lotka-Volterra Model
- (iv) Botanical Gardens
- (v) Wetlands

4. (a) Using national and international case studies, discuss the ethical, legal, and economic challenges associated with biodiversity management. (8 marks)

(b) What are mangroves? Discuss their significance. What are some of the major threats to mangroves in ecosystem. (7 marks)

**Or**

How does remote sensing help monitor habitat loss and ecosystem changes?

(7 marks)

5. (a) What are biodiversity hotspots? What are the major criteria for designating an area as a hotspot? Briefly tell about any two hotspots in India. (8 marks)

(b) What is GBIF? Discuss its role in sharing biodiversity data, and how it helps conservation? (7 marks)

**Or**

What do you understand by Mass Extinction? Briefly discuss any three mass extinctions in earth's history along with their causes of extinctions. (7 marks)