

- Instructions:** (1) All Questions in Section I carry equal Marks.
 (2) Attempt any THREE questions in Section I.
 (3) Questions IX in Section II is Compulsory.
 (4) Draw Figures where necessary. Show question number against each answer.
 (5) Figures in right are marks.

Section-I

1. (A) Importance of Biodiversity Patterns In conservation. 7
 (B) Describe spatial patterns in Biodiversity. 7
2. (A) Detailed Note on community diversity estimation. 7
 (B) Explain sampling strategies and surveys of Biodiversity. 7
3. (A) Short note on Carbon Cycle with examples. 7
 (B) Describe Nitrogen cycle with examples. 7
4. (A) Give importance of different values of biodiversity. 7
 (B) Describe water Purification technique. 7
5. (A) Explain Threats of Biodiversity. 7
 (B) Describe natural and anthropogenic disturbances of biodiversity. 7
6. (A) Explain Habitat Loss, Habitat fragmentation & habitat degradation. 7
 (B) Describe Hotspot area of World. 7
7. (A) Give detail Note on National Park of India. 7
 (B) Describe IUCN category with examples. 7
8. (A) Explain India is mega diversity Nation. 7
 (B) Describe *Ex-situ* conservation of biodiversity. 7
9. Answer in short (Any Eight) 8
 - (1) What is the reason behind the vast diversity in Indian ecology?
 - (2) Name an artificial ecosystem with high productivity.
 - (3) In the IUCN Red List (2004), what does 'Red' represent?
 - (4) State a difference between endemic and exotic species.
 - (5) Differentiate between species diversity and ecological diversity.
 - (6) Define the Red Data Book.
 - (7) What is a gene pool?
 - (8) What do you mean by 'Frugivorous'?
 - (9) Expand IUCN.
 - (10) What is Endemism
 - (11) What is a biodiversity hotspot?
 - (12) Define: Deforestation.
 - (13) How can the loss of one species lead to the extinction of another?
 - (14) Can diversity and productivity of a natural community be constant for over a hundred years?
 - (15) Give two names of National Park of Gujarat?
 - (16) What are the factors that determine a species as threatened?
 - (17) Define: Habitat Loss
 - (18) How do scientists estimate the total number of species on earth?
 - (19) State two ways through which humans are benefitted from biodiversity.
 - (20) Define endangered species with an example for endangered plant and Animal species.