January 2023
M.Sc. Environmental Science Ist SEMESTER
Ecology and Biodiversity (EVS-101 B)

Time: 3 Hours   Max. Marks:75

Instructions: 1. *It is compulsory to answer all the questions (1.5 marks each) of Part -A in short.*
2. *Answer any four questions from Part -B in detail.*
3. *Different sub-parts of a question are to be attempted adjacent to each other.*

PART -A

Q1 (a) Differentiate Autecology and synecology. Give suitable examples.   (1.5)

(b) Write about biological level of organization with the help of flow chart.   (1.5)

(c) Explain why some ecological pyramids are upright and some are inverted?   (1.5)

(d) Enlist major threatened species of flora and fauna in India.   (1.5)

(e) Make a labeled diagram of Nitrogen cycle.   (1.5)

(f) Discuss different types of ecological succession.   (1.5)

(g) What is the difference between habitat and niche?   (1.5)

(h) Differentiate between Endangered and Extinct species.   (1.5)

(i) What are hotspots of biodiversity? Which hotspots are found in India? Give (1.5) their salient features.

(j) What are the keystone, umbrella and flagship species. Give examples.   (1.5)

PART -B

Q2 (a) Briefly explain how light and temperature affect the distribution of plant (8) species. Give suitable examples.

(b) Write a note on different population characteristics. Give suitable examples.   (7)

Q3 (a) Explain the Single channel and double channel energy flow model with the help (8) of suitable diagrams.

(b) What is ecological succession? Detail its various steps.   (7)

Q4   Give a detailed account of positive and negative population interactions.   (15)

Q5 (a) What are food chains and food webs? Give comparative account of grazing and (8) detritus food chain.

(b) Explain community characteristics with suitable examples.   (7)

Q6 (a) Explain in-situ and ex-situ approach of biodiversity conservation with suitable (8) examples.

(b) What are the threats to biodiversity? Explain.   (7)

Q7   Write the process of biological invasion in detail. Discuss at least three major (15) invasive species in India.

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