

U.G. 4th Semester Examination - 2024**BOTANY****[HONOURS]****Course Code : BOT-H-CC-T-09****(Plant Ecology and Phytogeography)****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 of the following: $2 \times 5 = 10$
- a) What is ecological pyramid?
 - b) Mention the difference between habitat and niche.
 - c) What are epibiotics? Cite an example.
 - d) Differentiate between resistance and resilience of an ecosystem.
 - e) Schematically represent a detritus food chain.
 - f) Mention the difference between habitat and niche.
 - g) What is bioremediation?
 - h) Name the factors enable soil to retain water.

[Turn over]

2. Answer any two of the following questions:

5×2=10

- a) Write the roles of soil moisture in distribution of species with suitable examples.
- b) List the main processes involved in hydrological cycle.
- c) Discuss in brief the flow of energy in ecosystem.
- d) Point out the factors that influence the adaptation of plants in nature.

3. Answer any two of the following questions:

10×2=20

- a) What is edge effect? Explain why edges of plant communities are both structural and functional units. Differentiate between preclimax and postclimax community. 2+6+2
- b) Write the key characteristics of a population ecology and explain how these characteristics influence population dynamics. Explain the concept of ecological speciation and mention the processes that lead to formation of new species. 5+5
- c) Write notes on : 5+5
 - i) Multi stress adaptation in plant
 - ii) Phosphorus cycle

d) Distinguish between

2½×4=10

- i) Autogenic and Allogenic succession
- ii) Food Chain & Food Webs
- iii) Biomass and Standing Crop
- iv) Commensalism and Parasitism.