



WEST BENGAL STATE UNIVERSITY
B.Sc. Honours 4th Semester Examination, 2023



BOTACOR09T-BOTANY (CC9)
PLANT ECOLOGY AND PHYTOGEOGRAPHY

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.
All symbols are of usual significance.*

1. Answer the following questions: 1×6 = 6
 - (a) Define plant ecology.
 - (b) What is an ecotype?
 - (c) What is speciation?
 - (d) Define standing crop.
 - (e) Write the name of an endemic plant.
 - (f) Give an example of tropical rainforest.

2. Answer any **eight** questions from the following: 3×8 = 24
 - (a) What are the chemical and biological components of the soil? 1½ + 1½
 - (b) What do you mean by 'water table'? Define aquifer. 2+1
 - (c) Mention the adaptations of plants to temperature and wind factors. 1½ + 1½
 - (d) What are the various states of water in the environment?
 - (e) Explain the ecological trophic organisation.
 - (f) Differentiate between food chain and food web.
 - (g) Differentiate between 'r' and 'k' selection of the population with examples.
 - (h) Define the term niche. Explain what is fundamental niche. 1+2
 - (i) Distinguish between symbiosis and parasitism with an example for each. 1½ + 1½
 - (j) Explain Shelford's law of tolerance with diagram.
 - (k) Explain exponential and logistic growth patterns.
 - (l) Explain biogeochemical cycle in the atmosphere.

3. Answer any **two** questions from the following: 5×2 = 10
 - (a) Explain the process of plant succession with proper diagram. 3+2
 - (b) Explain the ecotone and mention the importance of edge effect. 2+3
 - (c) With suitable diagram, briefly discuss the Carbon Cycle.
 - (d) Write a note on the phytogeographical divisions of India as given by BSI (1996).

—x—