



WEST BENGAL STATE UNIVERSITY

B.Sc. Honours 4th Semester Examination, 2021

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 humus.
 - (b) What are Hekiskotherms?
 - (c) Name one area of India which is concerned with endemic vascular plants.
 - (d) What is sedimentary cycle?
 - (e) What do you mean by ecological efficiency?
 - (f) What is meant by Ecesis?

2. Answer any **eight** questions from the following: 3×8 = 24
 - (a) Give a brief account on different steps of soil formation. 3
 - (b) Write a short note on hydrological cycle with a schematic diagram. 3
 - (c) Write a short note on climax concepts. 3
 - (d) Comment on the different types of biotic interrelationships. 3
 - (e) Define endemism. Give one example. Who had coined the term? 1+1+1
 - (f) Distinguish between grazing and detritus food chain. 3
 - (g) What is the difference between r selected and k selected species? 3
 - (h) Characterise with equation and one example each for Exponential and Logistic growth pattern. $1\frac{1}{2} + 1\frac{1}{2}$
 - (i) Define biome. What type of vegetation is observed in tropical rain forests? 2+1
 - (j) Write about the concept of ecological amplitude. 3
 - (k) Give the principal adaptational features which protect plants against high temperature injury. 3
 - (l) Give a schematic diagram of the Carbon Cycle. 3

3. Answer any *two* questions from the following: 5×2 = 10
- (a) Explain the succession processes and types. 3+2
- (b) Give an account on the energy flow in ecosystems. 5
- (c) Write an account on the effects of wind on plants. Illustrate Shelford's law of tolerance. 3+2
- (d) Write the phytogeographical divisions of India according to the BSI (1996) with their local vegetation. 2+3

N.B. : *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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