



WEST BENGAL STATE UNIVERSITY

B.Sc. Honours 2nd Semester Examination, 2021

BOTACOR04T-BOTANY (CC4)

ARCHEGONIATE

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 briefly: 1×6 = 6
 - (a) Name a pollution sensitive Bryophyte.
 - (b) Name one aquatic Bryophyte.
 - (c) Which plant group is also called vascular cryptogams?
 - (d) What is apospory? Give example.
 - (e) Name one living fossil of Gymnosperm.
 - (f) Name two drug yielding Gymnosperm.

2. Answer any **eight** questions from the following: 3×8 = 24
 - (a) Mention the distinctive features of leaf of *Sphagnum*. 3
 - (b) Mention the salient features of Bryopsida. Mention two advanced features found in the sporophyte of *Anthoceros*. 2+1
 - (c) State the Angiospermic features of *Gnetum*. 3
 - (d) Write a short note on Gemma cup. 3
 - (e) Comment on the morphological nature of rhizophore of *Selaginella*. 3
 - (f) Mention the distinguishing characteristics of the early land plants with an example. 3
 - (g) What is plicate mesophyll? State the xerophytic characters of the genus where it is found. 2+1
 - (h) Distinguish between Gradate sorus and Coenosorus with examples. 3
 - (i) Mention one similarity and one dissimilarity of Bryophytes with Pteridophytes. Comment on the elaters found in the spores of *Equisetum*. 2+1
 - (j) Distinguish between the Coralloid root and the Mycorrhizal root with example. 3
 - (k) Write down the differences between Manoxylic and Pycnoxylic wood with one example of each type. 3



(l) Draw and level the longitudinal section of *Equisetum* cone.

3. Answer any *two* questions from the following:

- (a) Compare the photosynthetic region as seen in the internal organization of the thallus of *Riccia* and *Marchantia* with diagrams. 5
- (b) Give a brief outline of the Telome theory for explaining the evolution of macrophyllous leaves in Pteridophytes. 5
- (c) Mention two fern characters of *Cycas*. Describe the Microsporophyll and Megasporophyll structure of *Cycas* with suitable diagrams. 1+2+2
- (d) Explain heterospory in Pteridophytes with a diagram. Mention its importance in the evolution of seed habit. 3+2

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.*

—x—