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. 2+1

3. Answer any ***two*** questions from the following: 5×2 = 10

(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.*

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