



'সমানো মন্ত্র: সমিতি: সমানী'

UNIVERSITY OF NORTH BENGAL
B.Sc. Honours 2nd Semester Examination, 2023

CC4-BOTANY
ARCHEGONIATE

Time Allotted: 2 Hours

Full Marks: 40

The figures in the margin indicate full marks.

GROUP-A

1. Answer any **five** questions from the following: 1×5 = 5
- (a) What is apospory?
 - (b) Give the botanical name of two timber yielding plants belonging to Pinaceae.
 - (c) What is the role of protonema in the life cycle of moss plant?
 - (d) What is calyptra?
 - (e) State one economic importance of *Sphagnum*.
 - (f) Why bryophytes are called amphibians?
 - (g) What is incipient heterospory?
 - (h) What is transfusion tissue? What is its function?

GROUP-B

2. Answer any **three** questions from the following: 5×3 = 15
- (a) Distinguish between Hepaticopsida and Bryopsida. 5
 - (b) Describe the anatomical structure of *Cycas* leaflet. Name one Indian species of *Cycas* sp. 4+1
 - (c) Discuss the different types of stele found in pteridophytes with suitable diagrams. 5
 - (d) Write a short note on the economic importance of pteridophytes. 5
 - (e) Write a short note on gametophytes of Rhyniopsida. 5

GROUP-C

3. Answer any **two** questions from the following: 10×2 = 20
- (a) Draw and describe the gametophytic plant body of *Anthoceros*. Write a short note on the evolutionary significance of the sporophyte of *Anthoceros*. 6+4
 - (b) Describe the sporophytic plant body of *Equisetum*. Describe the gametophytic stage of prothallus of *Equisetum* with suitable diagram. 5+5
 - (c) Describe the structure of *Cycas* and *Pinus* ovule in detail with labelled diagram. 5+5
 - (d) Compare the sporophytes of *Marchantia* and *Funaria* with suitable diagram. 5+5

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