



**WEST BENGAL STATE UNIVERSITY**  
B.Sc. Honours 2nd Semester Examination, 2023

**BOTACOR04T-BOTANY (CC4)**

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
- Name one aquatic bryophyte.
  - Why bryophytes are called amphibious plants?
  - Name one pteridophyte used as biofertilizer.
  - What are meristemes? Where do you find them?
  - What are coralloid roots?
  - In which gymnosperm perianth is found?
2. Answer any **eight** questions from the following: 3×8 = 24
- Draw and label the internal structure (L.S.) of *Funaria* sp. capsule. 1+2
  - Draw and describe the leafy plant body of *Porella* sp. 1+2
  - How would you differentiate *Pellia* and *Anthoceros* based on their thallus anatomy? 1 1/2 + 1 1/2
  - Comment on the morphological nature of rhizophore of *Selaginella* sp. 2+1
  - Briefly describe the strobilus structure of *Equisetum* with neat labelled diagram. 1 1/2 + 1 1/2
  - Compare the reproductive structures of *Psilotum* with *Selaginella*. Which is considered advanced and why? 2+1
  - Describe the prothallus structure of *Pteris* with labelled diagram. 1 1/2 + 1 1/2
  - What is apogamy? Mention different causes of apogamy. 1+2
  - Draw and describe the structure of male cone of *Cycas* sp. 1+2
  - Distinguish between long shoot and dwarf shoot of *Pinus*. Mention two xerophytic characters of *Pinus* needle. 2+1
  - Draw and describe the male cone of *Gnetum* sp. 1+2
  - Give the examples of gymnosperms: 1+1+1
    - Without archegonium
    - Not having female cone
    - Having flagellated sperms.
3. Answer any **two** questions from the following: 5×2 = 10
- What is telome? Give a brief idea about the telome concept. 1+4
  - Distinguish between photosynthetic tissue of *Riccia* and *Marchantia* with labelled diagram. 3+2
  - Differentiate between homosporous and heterosporous condition. Briefly discuss the role of heterospory in origin of seed habit. 1+4
  - What is 'Sulphur shower'? Describe the structure of male and female cone of *Pinus* with labelled sketches. 1+2+2

—x—