

**FIRST SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2022**  
**(Regular/Improvement/Supplementary)**

**BOTANY**  
**FBOT1C01-PHYCOLOGY, BRYOLOGY, PTERIDOLOGY AND GYMNOSPERMS**

**Time: 3 Hours****Maximum Weightage: 30****Part A: Answer any *four* questions. Each carries *two* weightage.**

1. Discuss the role of bryophytes as indicators of environmental pollution.
2. Mention the contributions of Indian Pteridologists.
3. Explain the terms Akinetes, Thermophyte, Cap cells and Chromatophore.
4. Differentiate apospory, apogamy and parthenogenesis in pteridophytes with example.
5. Explain the auxospore formation in Centrales.
6. Based on the amount of xylem elements in the wood, how gymnosperm is classified? Explain.
7. Explain Polycyclic wood and ovuliferous scale.

**(4 × 2 = 8 weightage)**

**Part B: Answer any *four* questions. Each carries *three* weightage.**

8. Describe the spore dispersal mechanism in different groups of bryophytes?
9. Explain different Photosynthetic products in algae.
10. Elaborate on the origin and evolution of sporangia in pteridophytes.
11. Explain the range of thallus organization in Chlorophyceae.
12. Write the features of Order Cycadeoideales with special reference to affinities with angiosperms.
13. Write an account on the structure of synangium. Draw diagram.
14. What are the affinities of Cordaitales?

**(4 × 3 = 12 weightage)**

**Part C: Answer any *two* questions. Each carries *five* weightage.**

15. Discuss the evolution of sporophyte in bryophytes with neat labelled diagrams.
16. Explain the economic importance of gymnosperm.
17. Give a detailed account on the different life cycle patterns in algae.
18. Describe the Stelar structure in Pteridophytes with diagram.

**(2 × 5 = 10 weightage)**