QP Code: P25DRIS002

Reg. No : .....

Name : .....

ST MARY'S COLLEGE (AUTONOMOUS), THRISSUR-20

I SEMESTER (CBCSS - PG) DEGREE EXAMINATIONS, OCTOBER 2025

(Regular/Improvement/Supplementary)

M. Sc. Botany

BOT1C01 : Phycology, Bryology, Pteridology and Gymnosperms

2024 Admission Onwards

Time:3 Hours **Maximum Weightage:30**

Part A

*Short answer type questions. Answer **any four**. Weightage **2** for each.*

(4x2 = 8 Weightage)

1. What are algal blooms? How is it formed?
2. Define apogamy. Add a note on the methods used to induce this process in pteridophytes artificially?
3. Briefly mention the siphonous line of evolution.
4. Write a note on the sporophyte of Anthoceros with a neat labelled diagram.
5. Explain the major characteristic features of Bryophytes with examples.
6. Give an account on the special features of pycnoxylic and manoxylic wood.
7. Compare the development of eusporangiate and leptosporangiate developement of sporangia in pteridiphytes.

Part B

*Short essay-type questions. Answer **any four**. Weightage **3** for each.*

(4x3 = 12 Weightage)

8. Describe the structure and function of an algal cell with reference to Chlamydomonas.
9. Explain the incipient heterosporous pteridophytes.
10. Analyse the maturation of the sporangia within the sorus.
11. Give a short note on pteridophyte with a low chromosome number.
12. Elucidate the theoretical frameworks that advocate for the Bryophytic origin of Pteridophytes.
13. Enumerate the classification of Pteridophytes according to Holttum's system of classification.
14. Explain the anatomical and morphological features, reproduction, and interrelationship of the order Pteridospermales.

Turn Over

Part C

*Essay-type questions. Answer **any two**. Weightage **5** for each.*
(2x5 = 10 Weightage)

15. Mention the anatomy, reproduction, and phylogeny of the Sphaerocarpales.
16. Explain the origin, evolution of gametophytic and sporophytic stages in Bryophytes.
17. Explain the thallus structure, cell ultrastructure, and reproduction in Phaeophyta with suitable examples.
18. Describe the process of microgametophyte development in Pteridophytes in the evolutionary aspect.

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