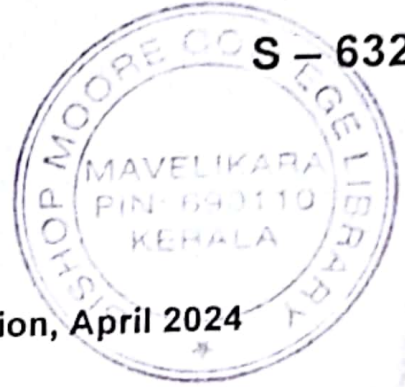


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S - 6321

Reg. No. :

Name :



First Semester M.Sc. Degree Examination, April 2024

Botany

BO 212 : BRYOPHYTA, PTERIDOPHYTA AND GYMNOSPERMS

(2019 Admission Onwards)

Time : 3 Hours

Max. Marks : 75

I. Answer the following questions.

1. Name a fossil bryophyte?
2. What kind of life cycle is observed in *Cyathodium*?
3. Which era is known as the age of pteridophytes?
4. Who is known as the Father of Indian Pteridology?
5. What is a mesome?
6. Name the fern which is used as a biofertilizer.
7. Which are the structural components that phloem tissue lacks in gymnosperms?
8. Name an Old World species of cypress?
9. Give an example for a monoecious gymnosperm.
10. Name an extinct order of seed-bearing plants with fern-like leaves.

(10 × 1 = 10 Marks)

P.T.O.



II. Answer the following questions in not more than 50 words.

11. (a) Give an account on the contributions of Indian bryologists.

OR

(b) Explain the use of bryophytes as indicators of mineral enrichment and pollution.

12. (a) Give an account of the evolution of sorus in pteridophytes.

OR

(b) Compare the terms haplodiplontic and diplohaplontic.

13. (a) Describe the ecological importance of pteridophytes.

OR

(b) Compare eusporangiate and leptosporangiate ferns.

14. (a) What is seed habit and how it is developed in gymnosperms?

OR

(b) Describe the various parts of cycads that are edible.

15. (a) Distinguish between megasporophyll and microsporophyll in gymnosperms.

OR

(b) Enumerate the differences between gymnosperms and angiosperms.

(5 × 2 = 10 Marks)



III. Answer the following questions in not more than 150 words.

16. (a) Give a brief account of the anatomical features of *Polytrichum*.

OR

(b) Describe the characteristic features of *Anthoceros*. Mention its evolutionary significance.

17. (a) Distinguish between the life cycles of liverworts and hornworts.

OR

(b) Describe the evolutionary trends in the gametophytes of pteridophytes.

18. (a) Compare the sexual and asexual reproduction in *Ceratopteris*.

OR

(b) Give an account of the comparative morphological features and life cycle of Psilopsida.

19. (a) Describe the classification of pteridophytes according to Bierhorst.

OR

(b) Compare the characteristics of Sphenopsida and Pteropsida.

20. (a) Describe the stelar types and its evolution in pteridophytes.

OR

(b) Give an account of paleobotany. Add notes on preservation of plant fossils.

21. (a) Compare the common characteristics shared by all four divisions of gymnosperms.

OR

(b) Distinguish between the male cones and female cones of *Zamia*.



22. (a) Describe the economic importance of gymnosperms.

OR

(b) Explain the habit, anatomy and reproduction of *Ephedra*.

(7 × 5 = 35 Marks)

IV. Answer the following questions in not more than 250 words

23. (a) Pteridophyte plants have a long fossil history. Discuss.

OR

(b) Describe the telome concept used to explain the origin and evolution of the major groups of pteridophytes.

24. (a) Compare the sporophyte characteristics of the major groups of bryophytes.

OR

(b) Discuss the resemblances of *Gnetum* with other members of Gnetales and Angiosperms.

(2 × 10 = 20 Marks)

