

A-034

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[Roll No.]

MSCBOT-503

Pteridophytes, Gymnosperms and Palaeobotany

M.Sc. Botany (MSCBOT)

1st Semester Examination June, 2024

Time : 2:00 Hrs.

Max. Marks : 70

Note :- This paper is of Seventy (70) marks divided into Two (02) Sections 'A' and 'B'. Attempt the questions contained in these Sections according to the detailed instructions given therein. *Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.*

Section-A

(Long Answer Type Questions) 2×19=38

Note :- Section 'A' contains Five (05) Long-answer type questions of Nineteen (19) marks each. Learners are required to answer any *two* (02) questions only.

A-034/MSCBOT-503 (1)

P.T.O.

1. Discuss the various trends in Gametophyte evolution among the Pteridophytes.
2. Describe the morphology and internal structure of reproductive organs in *Adiantum*.
3. Describe the morphology, structure and reproduction in *Cycadeodales*.
4. Write explanatory notes on :
 - (a) Geological lime scale
 - (b) Techniques to study fossil preservation
5. What is heterospory ? Discuss its occurrence in Pteridophytes and relation to seed habit.

Section–B

(Short Answer Type Questions) 4×8=32

Note :- Section ‘B’ contains Eight (08) Short-answer type questions of Eight (08) marks each. Learners are required to answer any *four* (04) questions only.

1. Describe evolutionary tendencies in reproductive structure of Gymnosperms.

2. Write notes on the following :
 - (a) Megasporophyll in Cycadales
 - (b) Distribution of Gymnosperms
3. Elucidate the organization and evolutionary tendencies of sorus in ferns.
4. Discuss morphology, structure and reproduction in Ephedrales.
5. Anthocerotales are considered as the transition group, between thalloid liverworts and the more advanced true mosses, Discuss.
6. Diagrammatically explain the anatomy of the Sporocarp of Salvinia.
7. Define megagametogenesis and female gametophyte development in Ginkgo.
8. Explain the structure of the male and female cones in Welwitschia.
