

2023
M.Sc.
First Semester
CORE – 03
BOTANY
Course Code: MBOC 1.31
(Gymnosperms & Paleobotany)

Total Mark: 70
Time: 3 hours

Pass Mark: 28

Answer five questions, taking one from each unit.

UNIT-I

1. Give an account on the affinities of gymnosperms with pteridophytes and angiosperms. 14
2. Write notes on the following: 7×2=14
 - (a) Characteristic features of gymnosperms
 - (b) Classification of gymnosperms proposed by Bierhorst, 1971

UNIT-II

3. Write a comparative account of the reproductive structures of *Gnetum* and *Ephedra*. 14
4. Briefly explain the internal structures of coralloid root, stem, rachis and leaflet of *Cycas*. 14

UNIT-III

5. Explain the continental drift theory proposed by Alfred with evidences. Discuss on the causes of plate tectonic movement. 8+6=14
6. Write notes on the following: 7×2=14
 - (a) Compression fossil
 - (b) Biochemical fossil

UNIT-IV

7. Discuss on the salient features of Pentoxylales and its affinities with Cycadales and Coniferales. 6+4+4=14
8. Discuss on the salient features of Cycadeoidales and its affinities with ferns and pteridospermales. 6+4+4=14

UNIT-V

9. Explain the general features of *Asteroxylon* with suitable diagrams. 14
 10. Discuss on the applications of paleobotany in oil and coal exploration. 7+7=14
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