

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



B.Sc. DEGREE EXAMINATION – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY

SECOND SEMESTER – APRIL 2023

16/17/18UPB2MC01 – PTERIDOPHYTES, GYMNOSPERMS AND PALEOBOTANY

Date: 10-05-2023

Dept. No.

Max. : 100 Marks

Time: 09:00 AM - 12:00 NOON

Part A

Answer the following, each within 50 words

(10 x 2 =20 marks)

1. Define Stele.
2. Differentiate sporophyte and gametophyte.
3. Draw and label the structure of plant body of *Psilotum*.
4. Define sorus.
5. Give any 2 salient features of Cycadales.
6. What is a dioecious condition?
7. Define circinate vernation.
8. Draw and label the male cone of *Pinus*.
9. What are fossils?
10. Write a note on radiocarbon dating.

PART B

Answer the following, each within 500 words. Draw diagrams and flowcharts wherever necessary.

(5 x 7 = 35 marks)

- 11 a. Tabulate the Reimer system of classification of Pteridophytes.
or
b. List out the general characters of Pteridophytes.
- 12 a. Describe the internal structure of the sporocarp of *Marsilea*.
or
b. Draw and describe the internal structure of *Lycopodium* cone.
- 13a. Write notes on the important characteristics of Coniferales and Gnetales.
or
b. Discuss the Sporne's classification of Gymnosperms.
- 14a. Draw and describe the T.S. of pine needle.
Or
b. Draw and describe the structure of T.S. of *Gnetum* leaf.

15a. Discuss briefly the techniques to study fossils.

or

b. Give an account on the geological time scale.

PART C

Answer **any three** of the following, each within 1200 words. Draw diagrams and flowcharts wherever necessary. (3 x15 = 45 marks)

16. Discuss the stelar system in Pteridophytes with suitable diagrams.

17. Give an account on the lifecycle of *Equisetum* with relevant diagram.

18. Write in detail on the economic importance of Gymnosperms.

19. Discuss in detail on the lifecycle of *Cycas* with suitable diagrams.

20. Write in detail on the different types of fossils.

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