

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



**B.Sc. DEGREE EXAMINATION – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
SECOND SEMESTER – APRIL 2022**

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

Date: 16-06-2022

Dept. No.

Max. : 100 Marks

Time: 01:00-04:00

Part A

Answer the following, each within 50 words

(10 x 2 = 20 marks)

1. Define Stele.
2. What are vascular cryptogams?
3. Differentiate sporophyte and gametophyte.
4. Define sorus.
5. Write short notes on pro-gymnosperms.
6. Describe circinate vernation.
7. What is a transfusion tissue?
8. Mention any 4 angiospermic features found in *Gnetum*.
9. What are fossils?
10. Write notes on *Calamites*.

PART B

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

(5 x 7 = 35 marks)

- 11a. Give an account on heterospory and seed habit.
or
b. List the general characters of Pteridophytes.
- 12a. Give an account on the L.S. of the *Lycopodium* cone.
or
b. Describe the sporocarp of *Marsilea*.
- 13a. Give a brief account on the major classes of Gymnosperms.
or
b. Discuss the salient features of Gymnosperms.
- 14a. Describe the internal structure of *Cycas* leaflet.
or
b. Explain the L.S. of female cone of *Pinus*.
- 15a. Write notes on the techniques available 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. Give an account on the evolution and different types of steles.
17. Explain the life cycle of *Equisetum*.
18. Give a detailed note on the economic importance of Gymnosperms.
19. Discuss the lifecycle of *Cycas*.
20. Elaborate on the different types of fossils.

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