



**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

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

**SECOND SEMESTER – APRIL 2023**

**UPB 2502 – PTERIDOPHYTES, GYMNOSPERMS AND PALEOBOTANY**

Date: 03-05-2023

Dept. No.

Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

**PART A**

**Answer the following, each within 50 words**

**(10 x 2 =20 marks)**

1. What is heterospory?
2. Define strobilus.
3. Cite the uses of *Azolla*.
4. Draw and label the plant body of *Equisetum*.
5. List any 4 important features of gymnosperms.
6. What are Pro-gymnosperms?
7. Draw and label the male cone of *Gnetum*.
8. What is Canada balsam?
9. What are fossil plants?
10. Write a note on radio-carbon dating.

**PART B**

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

**(5 x 7 = 35 marks)**

11. a. Describe the different types of stelar system in Pteridophytes.  
Or  
b. List out the features of *Psilophyta* and *Lycophyta*.
12. a. Draw and describe the internal structure of *Equisetum* cone.  
Or  
b. With a labelled diagram describe the plant body of *Marsilea*.
13. a. Outline the classification of Gymnosperms according to Sporne.  
Or  
b. List out the characters of *Pteridospermales* and *Cycadales*.
14. a. Draw and describe the T.S. of *Cycas* leaflet.  
Or  
b. Describe the structure of the female cone of *Pinus*.
15. a. Give a brief account on the methods of fossilization.  
Or  
b. Give an account on different types of fossil forms.

## 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 general characters of Pteridophytes.
17. Give an account on the lifecycle of *Psilotum* with relevant diagram.
18. Write in detail on the economic importance of Gymnosperms.
19. Discuss in detail on the lifecycle of *Gnetum* with suitable diagrams.
20. Write in detail on the major events of the geological time scale.

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