



LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

SECOND SEMESTER – APRIL 2017

16UPB2MC01- PTERIDOPHYTES, GYMNOSPERMS AND PALEOBOTANY

Date: 22-04-2017
01:00-04:00

Dept. No.

Max. : 100 Marks

PART – A

(10 x 2=20 marks)

Answer the following, each within 50 words.

1. What is amphiphloic siphonostele?
2. Define Leptosporangium.
3. What is a strobilus?
4. State any two economic importance of Pteridophytes.
5. Mention the features of manoxylic wood.
6. What are pro-gymnosperms?
7. What is transfusion tissue? Mention its function.
8. What is polyembryony?
9. Mention any four techniques to study fossils.
10. Define geological time scale.

PART – B

(5 x 7=35 marks)

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

11. a. Outline the classification of Pteridophytes according to Reimer (1954).

(OR)

- b. Trace out the life cycle of a heterosporous Pteridophyte.

12. a. Describe the strobili of *Equisetum*.

(OR)

- b. Explain the sporophyte of *Adiantum*.

13. a. List out the salient features of Bennettitales.

(OR)

- b. Give an account on the general characteristics of Gnetales

14. a. Write a short note on the megasporophyll of *Cycas*.

(OR)

- b. Describe the male cone of *Pinus*.

15. a. Write notes on changes occurred during fossilization.

(OR)

- b. Give a brief account on *Lepidodendron*.

PART – C

(3 x 15=45 marks)

Answer any three of the following, each within 1200 words. Draw diagrams and flow charts wherever necessary.

- 16) Elaborate on the stellar system in Pteridophytes according to the evolutionary sequence.
- 17) Explain the life cycle of Lycopodium.
- 18) According to Sporne (1965), how are gymnosperms classified?
- 19) Compare and contrast the L.S of ovule of *Cycas* and *Gnetum*.
- 20) Write detailed account on different types of fossils.
