

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



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

**SECOND SEMESTER – APRIL 2018**

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

Date: 24-04-2018

Dept. No.

Max. : 100 Marks

Time: 01:00-04:00

**PART- A**

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

**(10×2=20marks)**

1. What is apospory?
2. Define alternation of generations.
3. Mention the association of mycorrhizae with a fern.
4. What is a sporocarp?
5. Explain the term transitional fossils.
6. What are progymnosperms?
7. What is a coralloid root?
8. What is transfusion tissue?
9. List out the contributions of Birbal Sahni.
10. Comment on coal balls.

**PART- B**

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

**(5×7=35marks)**

11. (a) Distinguish between eusporangiate and leptosporangiate development of sporangium.

**OR**

(b) What is heterospory and seed habit?

12. (a) How is strobilus of *Lycopodium* different from that of *Equisetum*.

**OR**

(b) Elaborate the synangium of *Psilotum*.

13. (a) Describe the salient features of Pteridospermales.

**OR**

(b) Explain the affinity of *Gnetum* to Angiospermae.

14. (a) Enlist the economic importance of Gymnosperms.

**OR**

(b) Explain the anomalous secondary growth in *Gnetum* stem.

15. (a) What is fossilization? Add a note on Geological time scale.

**OR**

(b) Write notes on *Williamsonia* .

**PART- C**

**Answer any three of the following, each within 1200 words. Draw diagrams and flowcharts wherever necessary: (3×15=45marks)**

16. Explain the various types of stelar system seen in pteridophyta.

17. Give a comparative account on the anatomical features of the petiole of *Adiantum* and *Marsilea*.

18. Enumerate the salient features of Gymnosperms.

19. Explain the life cycle of *Pinus*. Add a note on its economic importance.

20. Compare the sporophytes of *Rhynia*, *Lepidodendron* and *Calamites*.

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