

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034



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

FIRST SEMESTER – APRIL 2022

UPB 1502/16/17/18UPB2MC02 – PLANT ANATOMY AND EMBRYOLOGY

Date: 18-06-2022

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. What is sclerenchyma?.
2. What are cystoliths and raphides?
3. What are trichomes?
4. Describe the structure of anisocytic stomata?
5. Define Endarch.
6. What is hypodermis?
7. What is a tapetum?
8. Define hydrophily.
9. What is triple fusion?
10. Define parthenocarpy.

PART B

Answer the following, each within 500 words.

Draw diagrams / flowcharts wherever necessary.

(5 x 7= 35 marks)

11. a. What are meristems? Write notes on their classification.
(or)
b. Write short notes on collenchyma.
12. a. Explain the types of vascular bundles.
(or)
b. Write notes on the internal structure of monocot stem.
13. a. Explain about the internal structure of *Bignonia* Stem.
(or)
b. Write notes on the types of stomata in dicots.
14. a. Describe the structure of a mature anther.
(or)
b. Write notes on classification of pollen grains.
15. a. Write notes on the types of endosperms.
(or)
b. Discuss about fertilization and post fertilization changes.

PART C

Answer **any three** of the following, each within 1200 words.

Draw diagrams / flowcharts wherever necessary.

(3 x 15= 45 marks)

16. Explain in detail about the theories on organization of apical meristems.
17. Discuss the anatomy of roots in dicots and monocots.
18. Compare the anatomical features of dicot and monocot leaves.
19. Write detailed notes on the internal structure of ovules and its types.
20. Explain in detail about the structure of monocot embryo.

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