LOYOLA COLLEGE (AUTONOMOUS), CHENNAI - 600 034

FIRST SEMESTER - NOVEMBER 2022

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Sc. DEGREE EXAMINATION – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY

UPB 1502 - PLANT ANATOMY AND EMBRYOLOGY

Date: 03-12-2022	Dept. No.	Max.: 100 Marks
Time: 01:00 PM - 04:00 PM		

Part A

Answer the following, each within 50 words

 $(10 \times 2 = 20 \text{ marks})$

- 1. What are bast fibres?
- 2. List any two features of collenchyma.
- 3. What are bicollateral vascular bundles?
- 4. Define dendrochronology.
- 5. What are bulliform cells?
- 6. List out the type of cells in leaf epidermis.
- 7. Compare microsporogenesis with megasporogenesis.
- 8. Write a note on NPC system of classification.
- 9. What is triple fusion?
- 10. Mention chalazogamy.

PART B

Answer the following, each within 500 words. Draw diagrams and flowcharts wherever necessary. $(5 \times 7 = 35 \text{ marks})$

11a. Describe the structure of a plant cell.

or

- b. Write notes on the features of parenchyma. Add a note on its special types.
- 12a. Describe the internal structure of a monocot stem.

or

- b. Give an account on the types of vascular bundles.
- 13a. Explain the anatomical features of isobilateral leaf.

or

- b. Write notes on the types of stomata.
- 14a. Illustrate the structure of a mature anther.

or

- b. Describe briefly the different types of ovules.
- 15a. Give an account on the process of the development of dicot embryo

or

b. Write notes on endosperm and its types.

PART C
Answer any three of the following, each within 1200 words. Draw diagrams and flowcharts wherever
necessary. $(3 \times 15 = 45 \text{ marks})$
16. Give a detailed account of complex tissues in plants.
17. Explain in detail about the normal secondary growth in dicot stem.
18. Compare the anatomy of dicot root and monocot root.
19. Compile the various types of pollination in plants.
20. Summarize the process of fertilization and add notes on its types.
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