



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

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

**FOURTH SEMESTER – APRIL 2017**

**PB 4511- EMBRYOLOGY OF ANGIOSPERMS**

Date: 25-04-2017  
09:00-12:00

Dept. No.

Max. : 100 Marks

**PART – A**

**ANSWER THE FOLLOWING, EACH WITHIN 50 WORDS**

**(10X2= 20 Marks)**

1. Distinguish between exine and intine
2. Comment on Tapetum.
3. Mention the importance of Synergids
4. Write notes on Micropyle and Chalaza of a Ovule
5. What is Cross pollination?
6. What is Triple fusion?
7. Write short note on Endosperm haustoria
8. What is ruminant endosperm?
9. Write a note on Polyembryony
10. What is Parthenocarpy?

**PART – B**

**ANSWER THE FOLLOWING, EACH WITHIN 500 WORDS. DRAW DIAGRAMS AND FLOW CHARTS WHEREVER NECESSARY.**

**(5X7= 35 Marks)**

- 11.a) Explain the process of Microsporogenesis.  
**(OR)**
- b) Explain the structure of mature anther.
- 12.a) Briefly write about the nutrition of embryosac.  
**(OR)**
- b) Explain the structure of an Ovule and Mention its types
13. a) Briefly explain the process of self pollination  
**(OR)**
- b) Explain the various agents involved in cross pollination.

14. a) Describe the development of Dicot embryo.

(OR)

b) Describe the development of Monocot embryo.

15. a) Comment on Polyembryony and add a note on its types.

(OR)

b) Write a brief account on Apomixis.

### PART – C

**ANSWER ANY THREE OF THE FOLLOWING, EACH WITHIN 1200 WORDS, DRAW DIAGRAMS AND FLOW CHARTS WHEREVER NECESSARY (3 X15= 45 Marks)**

16. Explain the ultra structure of pollen grain and add a note on NPC system.

17. Write an elaborate note on structure and development of embryosac.

18. Explain about the post fertilization changes of the Ovary.

19. Give a detailed account on Nuclear and Cellular Endosperm

20. Explain Parthenocarpy and add a note on the methods to induce parthenogenesis

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