LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

FOURTH SEMESTER – **APRIL 2015**

PB 4511 - EMBRYOLOGY OF ANGIOSPERMS

Date : 18/04/2015 Dept. No. Max. : 100 Marks
Time : 09:00-12:00

PART-A

ANSWER THE FOLLOWING, EACH WITHIN 50 WORDS ONLY: (10x2=20)

1. What is pollenkitt?
2. Define Microsporogenesis.
3. Differentiate bitegmic from unitegmic ovules.
4. Give the significance of haustorial embryosac.
5. Define cleistogamy.
6. What are callose plugs?
7. What is ruminate endosperm?
8. What are suspensors?
9. Mention any one method to induce parthenocarpy.
10. Define polyembryony.

PART-B

ANSWER THE FOLLOWING QUESTIONS EACH WITHIN 500 WORDS.
DRAW DIAGRAMS WHEREVER NECESSARY: (5x7=35)

11. a) Describe the ultrastructure of a pollen grain.
(OR)
b) Explain briefly the applied aspects of palynology.

12. a) Describe the different types of ovules.
(OR)
b) Write notes on the nutrition of embryosac during its development.

13. a) Bring out the various agents in pollination.
(OR)
b) Give a brief note on syngamy, double fertilization and triple fusion.

14. a) Write an account on endosperm haustoria.
(OR)
b) Discuss briefly the basic types of endosperm.

15. a) Describe the types and applications of parthenocarpy.
(OR)
b) Comment on apomixes.

PART-C

ANSWER ANY **THREE** OF THE FOLLOWING, EACH NOT EXCEEDING 1200 WORDS.
DRAW DIAGRAMS WHEREVER NECESSARY. (3x15=45)

16. Describe the development and structure of a mature anther.

17. Explain the Polygonum, Allium and Peperomia types of embryosac development.

18. Bring out the floral mechanisms favouring self and cross pollination.

19. Trace the development of a dicot embryo and describe its structure.

20. Give an account on the types, causes and significance of polyembryony.

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