

Roll.No.

20UPBCT3006

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai - 600 044.

B.Sc PBPBT - END SEMESTER EXAMINATIONS - NOVEMBER 2025
SEMESTER - III

20UPBCT3006 - Anatomy of Angiosperms and Embryology

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

Section B

Answer any **SIX** questions ($6 \times 5 = 30$ Marks)

1. Explain the anatomical features of dicot stem with neat labelled diagram.
2. Interpret how the spatial arrangement of microspores differs among Tetrahedral, Isobilateral, Decussate, and T-shaped tetrads.
3. Describe the development of the female gametophyte in the Polygonum type with a neat labelled diagram.
4. Show the stages of Nuclear, Cellular, and Helobial endosperm development through clear diagrams.
5. Interpret the anatomical characteristics of dorsiventral and isobilateral leaves.
6. Predict the effect of tapetal malfunction on pollen development in plants with different tapetum types.
7. Describe the process of megasporogenesis with a neat labelled diagram.
8. Distinguish the functions of endosperm in seed development and seed germination.

Section C

Answer any **THREE** questions ($3 \times 10 = 30$ Marks)

9. Sketch neatly labelled diagrams to represent the types of nodes - unilacunar, trilacunar, and multilacunar.
10. Solve how the structural adaptations of stomata in dicot and monocot leaves contribute to efficient gas exchange and transpiration.
11. Associate the structure of a mature microsporangium with its function in pollen development.
12. Predict how changes in the orientation of the micropyle, chalaza, and funicle may lead to the formation of different types of ovules.

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13. Examine the developmental stages of the monocot embryo and justify how they differ from those of the dicot embryo.
