



QP CODE: 25024526



Reg No :

Name :

M.Sc DEGREE (CSS) EXAMINATION, APRIL 2025
Fourth Semester
M Sc PLANT BIOTECHNOLOGY
ELECTIVE - BS810401 - PLANT DEVELOPMENTAL BIOLOGY
2019 ADMISSION ONWARDS
F07E53E1

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

Weight 1 each.

1. Megaspore.
2. Double fertilisation.
3. Pin proteins.
4. Vernalization.
5. Shoot apical meristem.
6. Abaxial identity.
7. Regulation of auxin in root hair development.
8. ABCB 4 in Arabidopsis.
9. ABC model.
10. Florigen.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

Weight 2 each.

11. Self-incompatibility.
12. Structure of pollen sac.
13. Short note on embryonic axis specification.
14. Role of auxin in the establishment of polarity during embryogenesis.
15. Add a note on antagonism between SAM and lateral organs.





16. Axillary meristem initiation and axillary bud outgrowth.
17. Root apical meristem.
18. Describe the development of inflorescence meristem from shoot apical meristem.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

Weight 5 each.

19. Describe in detail about the developmental stages of dicot and monocot embryo. Mention about apical basal axis specification and position dependant development of embryo.
20. Write down a detailed note on vascular tissue differentiation and give a note on induction of xylogenesis using zinnia suspension- cultured cells.
21. Describe about the initiation and maintenance of RAM by auxin and cytokinin. Add a note on the structure and function of RAM.
22. Explain in detail about ABC model and write a note on asymmetric flower development.

(2×5=10 weightage)

