D 131267 **(Pages : 2)** **Name.....**

Reg. No.....

FIRST SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY) EXAMINATION, NOVEMBER 2025

(CBCSS)

Botany

BOT 1C 03—ANGIOSPERM ANATOMY, ANGIOSPERM EMBRIOLOGY, PALYNOLOGY AND LAB TECHNIQUE

(2020 Admission onwards)

Time : Three Hours Maximum : 30 Weightage

Section A (Short Answer Type Questions)

Answer any **four** *questions.*
Each question carries 2 *weightage.*

1. What are fusiform and ray initials ?
2. Give two examples of anomalous secondary growth in storage roots.
3. What are transfer cells ? Mention their function.
4. What is the function of the filiform apparatus ?
5. Define triple fusion.
6. Name two major contributors to palynology.
7. What is the principle of camera lucida ?

(4 × 2 = 8 weightage)

Section B (Short Essay Type Questions)

Answer any **four** *questions.*
Each question carries 3 *weightage.*

8. Discuss the process of sieve tube differentiation.
9. Describe anomalous secondary growth with reference to *Boerhaavia* and *Nyctanthes*.
10. Write short notes on mosaic endosperm and endosperm haustoria.

Turn over

11. What are the types of polyembryony? Mention their practical applications.

12. Compare eurypalynous and stenopalynous taxa with examples.

13. Briefly explain the principle and uses of sledge, rocking, and rotary microtomes.

14. Describe the composition and specific use of Carnoy's fluid and Nawaschins fluid.

(4 × 3 = 12 weightage)

Section C (Long Essay Type Questions)

Answer any **two** *questions.*
Each question carries 5 *weightage.*

15. Write an essay on the genetic and hormonal control of vascular differentiation in angiosperms.

16. Discuss parthenocarpy and its role in the production of seedless fruits.

17. Describe recent advances in palynological studies and their practical applications.

18. Write an essay on maceration, smears, and whole mounts as techniques in plant anatomy laboratories.

(2 × 5 = 10 weightage)