

M.Sc. (Botany) Semester - 3 (CBCS) Examination
OCT/NOV-2025 (AS PER SYLLABUS YEAR JUNE-2019)

Plant Anatomy, Embryology & Histological Techniques (Core (New))

Time: 2:30 Hours

Marks:70

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate marks.

SECTION- I

- Que.1 Write short note on
- (A) Describe RAM in detail with all the theories. (07)
 - (B) Write a note on "Secondary growth in di-cotyledons" (07)
- OR
- Que.1 What is Nodal Anatomy? State different Nodal types. (14)
- Que.2 Answer the following
- (A) Describe ABC model for flowering (07)
 - (B) Explain types of pollination with suitable examples. (07)
- OR
- Que.2 Define word Embryo sac and describe different types of embryo sac development. (14)
- Que.3 Answer the following (any seven) (07)
- 1) Write the name of vascular bundles present in plants.
 - 2) Explain – Root architect
 - 3) If male plant 8n and female plant 12n than what are genetic formation found in Zygote and Endosperm?
 - 4) What is polyembryony?
 - 5) What is the role of endosperm?
 - 6) Which are the controlling factors of flowering
 - 7) What is sexual incompatibility in plant
 - 8) Define the term: Gametophytes

SECTION- II

- Que.1 Explain Ca^{++} dependent homophillic and non-homophillic cell-cell adhesion. (14)
- OR
- Que.1 Write short notes on:
- (A) Apomixis (07)
 - (B) Uniports, symports and antiports. (07)
- Que.2 Describe the process of killing, fixing and sectioning for permanent stained preparation. (14)
- OR
- Que.2 Write short note on:
- (A) Mounting for temporary preparation (07)
 - (B) Unstained preparation for live cells (07)
- Que.3 Answer the following (any seven) (07)
- 1) Define the term 'diffusion'
 - 2) Give two differences between active and passive transport
 - 3) Define: embryology in relation to taxonomy
 - 4) Explain – whole mounts
 - 5) State the function of IF and associated proteins?
 - 6) What is different between actin and myosin
 - 7) What are insoluble polysaccharides?
 - 8) Give any two factors affecting on Diffusion
