

Your Roll No.....

M.Sc. BOTANY
SEMESTER III EXAMINATION 2023
PAPER CODE: MBO-CC301
PAPER TITLE: DEVELOPMENTAL & STRUCTURAL BOTANY

Time: Three Hours

Maximum Marks: 75

(Write your Roll No. at the top immediately on receipt of this paper)

Attempt ALL questions. All parts of a question must be attempted in continuation. Start answering each question on a new page. Cite examples and draw labelled diagrams wherever necessary.

Q1. Define the following (ANY TEN) [10x1.5=15]

Tension wood, Forisome, Tyloses, Intrafascicular cambium, Rhytidome, Triple fusion, Pollenkitt, Apospory, Self-incompatibility, Ruminant endosperm, Metaxenia, Compound pollen grains.

Q2. Write short notes (ANY THREE) [3x5=15]

- A. Somatic embryogenesis
- B. Structure of male gametophyte
- C. Pollen germination
- D. Female gametophyte
- E. Endospermic haustoria

Q3. Describe briefly (ANY TWO) [2x7.5=15]

- A. Cytological and molecular aspects of shoot apical meristem
- B. Floral development in *Arabidopsis*
- C. Leaf development and phyllotaxy

Q4. Explain briefly (ANY TWO) [2x7.5=15]

- A. Cytology of active and dormant vascular cambium
- B. Factors affecting the vascular cambium periodicity
- C. Cell division patterns and differentiation of young derivatives of vascular cambium

Q5. With the help of suitable diagrams, give a detail account of the origin, structure and function of the various components of periderm. [15]

OR

Give a comparative account of secondary xylem and secondary phloem of gymnosperms and angiosperms. [15]

.....XXX.....