

(2½ Hours)

[ Total Marks : 75

- N.B. : (1) All questions are compulsory.  
 (2) All questions carry equal marks.  
 (3) Draw neat and labeled diagrams wherever necessary.

1. Attempt any **two** of the following : 15
- Describe the structure of male cone of *Ephedra*. Add a note on structure of microsporangium and microspore.
  - With respect to *Ephedra* describe
    - T.S. of stem
    - T.S. of root
  - Describe the male cone and male flower of *Gnetum*.
  - Describe the structure of V.S. of ovule of *Gnetum*. Add a note on its systematic position.
2. Attempt any **two** of the following : 15
- Give the systematic position, distinguishing characters, floral formula and plants of economic importance of family Umbelliferae.
  - Write the morphological peculiarities and systematic position of family Cucurbitaceae.
  - Discuss the importance of Palynology in relation to taxonomy.
  - Discuss Bentham and Hooker's system of classification and comment on its merits and demerits.
3. Attempt any **two** of the following : 15
- Describe the structure of microsporangium and trace the process of microsporogenesis in Angiosperms.
  - Give the structure of megasporangium? Explain the process megasporogenesis.
  - Describe the structure of *Polygonum* type of embryo sac.
  - Describe the process of development of *Capsella* type of embryo.
4. Attempt any **two** of the following : 15
- Describe anomalous secondary growth in stem of *Achyranthes*.
  - Explain the anomalous secondary growth in Beet root.
  - What is anomalous secondary growth? Describe anomalous secondary growth in *Dracaena* stem.
  - What is stomata? Describe Paracytic and Anisocytic type of stomata.
5. Attempt any **three** of the following : 15
- Describe female cone of *Ephedra*.
  - Describe T.S. of *Gnetum* leaf.
  - Give economic importance of Palmae.
  - Describe double fertilization.
  - Describe Diacytic and Anomocytic stomata.
  - Describe anomalous secondary growth in Radish root.