

QP Code : 79577

(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
- (a) Give the systematic position of *Ephedra*. Describe the T.S. of stem of *Ephedra*.
 - (b) Describe the structure of male cone of *Ephedra*. Add a note on structure of microsporangium and microspore.
 - (c) Describe the female cone of *Gnetum*. Add a note on V.S. of ovule of *Gnetum*.
 - (d) With the help of labelled diagram describe the secondary growth in *Gnetum* stem.
2. Attempt any two of the following : 15
- (a) Give the systematic position, distinguishing characters, floral formula and plants of economic importance of family Capparidaceae.
 - (b) Write the morphological peculiarities and systematic position of family Palmae.
 - (c) Discuss the importance of Anatomy in relation to taxonomy.
 - (d) Give an outline of Bentham and Hooker's system of classification of angiosperms upto orders.
3. Attempt any two of the following : 15
- (a) Explain microsporangium and trace the development of male gametophyte.
 - (b) What is tapetum ? Describe the role of tapetum in microsporogenesis.
 - (c) What is megasporangium ? Trace the process of megasporogenesis.
 - (d) Give an account of development of *Capsella* type of embryo.
4. Attempt any two of the following : 15
- (a) Describe anomalous secondary growth in stem of *Bignonia*.
 - (b) Describe anomalous secondary growth in root of Beet.
 - (c) What is anomalous secondary growth. Describe anomalous secondary growth in *Dracaena*.
 - (d) What is stomata ? Describe Paracytic and Anisocytic type of stomata.
5. Attempt any three of the following : 15
- (a) Describe T.S. of *Gnetum* root.
 - (b) Write about female strobilus of *Ephedra*.
 - (c) Give Economic importance of Cucurbitaceae.
 - (d) Describe Double fertilization.
 - (e) Describe graminaceous and anomocytic stomata.
 - (f) Describe anomalous secondary growth in *Salvadora* stem.