

Use Separate Answer
Script for each Group

M.Sc. Examination, 2017
Semester – IV
Botany
Course - MBC- 41

Time: 3 Hours

Full Marks: 48

Questions are of value as indicated in the margin.

Group-A (Anatomy)

Answer *any three* questions.

1. Distinguish between axial parenchyma and ray parenchyma. Describe different types of axial parenchyma found in angiospermic wood. Add a note on phylogeny of axial parenchyma. 2+4+2=8
2. Enumerate the main morphological types of bark found in flowering plants and comment on their origin. Distinguish between outer bark and inner bark. Write the characteristic features of the walls of cork cells. 4+2+2=8
3. Write in brief the chemistry of different types of hemicellulose generally found in the cell walls of different groups of Tracheophyta. State the chemical nature and function of various types of cell wall proteins. 4+4=8
4. Mention the characteristic features of transfer cells and their function. Describe different types of transfer cells and their occurrence in plants. 4+4=8
5. Write short notes on *any two* of the following: 4x2=8
 - (a) Latex : Chemical nature and economic uses.
 - (b) Phylogenetic scheme of nodal anatomy considering trilacunar median two-trace condition as basal one.
 - (c) Significance of the plane of cell division in differentiation.
 - (d) Nuclear degeneration in sieve elements.

Group-B (Embryology and Pharmacognosy)

Answer *any three* questions.

1. Give a precise pharmacognostic account of *Strychnos* seed with reference to micromorphological and chemical characters. State its medicinal uses. 3+3+2=8
2. Briefly describe the two approaches to understand the nutrition of embryo. What is the unusual feature studied during embryo development in *Paeonia*? 6+2=8
3. Write different types of endosperm development in Angiosperms with suitable examples. 8
4. Discuss with suitable diagrams the development of embryo in *Najas lacerata*. What are the characteristic features of grass embryo development? 5+3=8
5. Write short notes on *any two* of the following: 4x2=8
 - (a) Suspensor
 - (b) Therapeutic importance of glycosides
 - (c) Cleavage polyembryony
 - (d) Proembryo