

B.A./B.Sc. 3rd Semester (Old Syllabus 2016)

BOTANY

Paper-III (A)

(Diversity of Seed Plants & Their Systematics-I)

Time Allowed—3 Hours] [Maximum Marks—35

SECTION-I

Note : Attempt all parts of Q. No. 1 of Section-I. Restrict your answer to 3-4 lines only. Each part carries 1 mark.

1. (i) Apomixis
- (ii) Phellogen
- (iii) Pycnoxylic wood
- (iv) Diploxylic bundles
- (v) Haplocheilic stomata
- (vi) Collar
- (vii) Petrifications.

SECTION-II

Note : Answer any four questions. Each question carries 7 marks.

2. Name the two main divisions of seed bearing plants and describe the major differences between them.

3. Explain the following :
 - (a) Progymnosperms
 - (b) How the fossils are formed ?
4. Explain the various events in the evolution of seed habit in plants.
5. What is sulphur shower ? With graphic representation, explain the life cycle of *Pinus*.
6. When did gymnosperms originate ? Give an account of fossil gymnosperms.
7. Draw well labelled diagrams of the following :
 - (a) T. S. of rachis (petiole) of *Cycas*.
 - (b) T. S. young stem of *Ephedra*.
8. Write briefly on the following :
 - (a) Xerophytic characters of gymnosperms.
 - (b) Vegetative morphology of *Ginkgo biloba*.
9. Name any two primitive angiosperms. Explain the origin and evolution of angiosperms.