

CSM : 14

BOTANY
PAPER - I

Time Allowed : 3 hours

Full Marks : 100

Marks for each question is indicated against it.

Attempt any 5 (five) questions taking not more than 3 (three) questions from each Part.

PART A

1. Write short notes on any two the following: **(2×10=20)**
 - (a) Role of microbes in agriculture
 - (b) Mycoplasma
 - (c) Prion and Prion hypothesis

2. Write short notes on any two of the following: **(2×10=20)**
 - (a) Economic importance of fungi
 - (b) Salient features of Coniferales or Cycadales
 - (c) Geological time scale

3. Give the salient features and brief outline of phylogenetic and modern system of classification of angiosperms. Mention its merits and demerits. **(14+6=20)**

4. Write the diagnostic characteristics of any two of the following families: **(2×10=20)**
 - (a) Fabaceae
 - (b) Poaceae
 - (c) Solanaceae
 - (d) Orchidaceae

PART B

5. Write short notes on any two of the following: **(2×10=20)**
- (a) Monosporic type of female gametophyte development
 - (b) Types of pollination
 - (c) Types of endosperm development
6. Answer any two of the following: **(2×10=20)**
- (a) Write ethnobotanical description of any two plants used by the people of North-Eastern India as timber.
 - (b) Energy plantations.
 - (c) Role of botanical gardens in conservation of plants.
7. Answer any two of the following:
- (a) Somatic embryogenesis and its role in crop improvement. **(10)**
 - (b) What do you understand by the term ‘totipotency’? Describe the significance of the phenomenon in plant biotechnology. **(2+8=10)**
 - (c) Micropropagation **(10)**
8. Write short notes on any two of the following: **(2×10=20)**
- (a) Glandular and non-glandular trichomes
 - (b) Anomalous secondary growth in *Bignonia*
 - (c) Formation of annual rings in angiosperms

* * * * *