

<b>CSM – 14/17</b>
<b>Botany</b>
<b>Paper – I</b>

*Time : 3 hours*

*Full Marks : 300*

*The figures in the right-hand margin indicate marks.*

*Candidates should attempt Q. No. 1 from Section – A and Q. No. 5 from Section – B which are compulsory and any **three** of the remaining questions selecting at least **one** from each Section.*

**SECTION – A**

1. Answer any **three** of the following in not more than **200** words each : 20×3 = 60
  - (a) Describe, in brief, about the role of microbes in agriculture and medicine.
  - (b) Enumerate the different modes of sexual reproduction in fungi.
  - (c) Write an account on the structure of viruses.

- (d) Describe the general characters and economic importance of Apiaceae (Umbelliferae).
2. Write notes on the following :  $20 \times 3 = 60$
- (a) Male cone in Cycas
  - (b) Different types of Stellar Systems in Ferns
  - (c) Cronquist system of Classification(1981)
3. Give answer of the following :  $20 \times 3 = 60$
- (a) Range of thallus structure in Algae
  - (b) Bacterial Blight of rice
  - (c) Apospory and Apogamy in the members of the Pteridophytes
4. Write notes on any **three** of the following :  $20 \times 3 = 60$
- (a) Geographical distribution of **Pinus** species in India
  - (b) Salient features and economic importance of Arecaceae (Palmae)
  - (c) Rust diseases caused by fungi
  - (d) Transformation and Transduction in Bacteria

## SECTION – B

5. Answer any **three** of the following : 20×3 = 60
- (a) Differentiate between anatomy of C<sub>3</sub> and C<sub>4</sub> plants.
  - (b) Describe the patterns of embryo development.
  - (c) Comment on the Chi-square test and Coefficient of Correlation.
  - (d) Write an account of Apomixis.
6. Answer the following :
- (a) Give an account of Mechanical tissues. 30
  - (b) Discuss the development of Male Gametophyte in Angiosperms. 30
7. Write in short on the following :
- (a) Importance of Tissue Culture 30
  - (b) The techniques of Herbarium preparation and their role in teaching and research 30
8. Write notes on the following :
- (a) Different Vavilovian Centres of origin of cultivated plants 30
  - (b) Fibre-yielding plants 30



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