

CSM : 14

BOTANY
PAPER - II

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. Discuss any two the following: **(2×10=20)**
 - (a) Structure and functions of mitochondria
 - (b) Fluid mosaic model of plasma membrane
 - (c) Polytene chromosome

2. Write notes on any two of the following: **(2×10=20)**
 - (a) Multiple alleles
 - (b) Cytoplasmic inheritance
 - (c) Molecular basis of mutation

3. Discuss any two of the following: **(2×10=20)**
 - (a) Ecological pyramids
 - (b) Sources of water pollution and its control
 - (c) Afforestation in Mizoram

4. Write notes on any two of the following: **(2×10=20)**
 - (a) Botanical regions of North-Eastern India
 - (b) Endemism
 - (c) Biodiversity and its conservation

PART B

5. Write short notes on any two of the following: **(2×10=20)**
- (a) Describe the procedure of hybridization in self-pollinated crops
 - (b) Molecular markers in plant breeding
 - (c) Sanger method of DNA sequencing
6. Write short notes on any two of the following: **(2×10=20)**
- (a) Standard deviation
 - (b) t-test
 - (c) Poisson distribution
7. Write short notes on any two of the following: **(2×10=20)**
- (a) Photoperiodism
 - (b) Different types of plant movements
 - (c) Auxins and their physiological effects
8. Write short notes on any two of the following: **(2×10=20)**
- (a) Regulation of enzyme activity
 - (b) Fermentation
 - (c) Nitrogen assimilation in plants

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