

CSM : 22

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. What is chromosomal aberration? Describe various types of chromosomal structural variations in plant cell. **(4+16=20)**
2. Answer the following: **(10×2=20)**
 - (a) Role of ribosome in initiation, elongation and termination of protein synthesis.
 - (b) Discuss One-gene, one-enzyme concept.
3. Write short notes on *any two* of the following: **(10×2=20)**
 - (a) Bioindicators
 - (b) Environment (Protection) Act 1986
 - (c) Social forestry
4. Discuss the following: **(5×4=20)**
 - (a) Significance of Ozone layer
 - (b) Plant indicators
 - (c) Endemism
 - (d) Characteristics of plants of Mangrove vegetation

PART - B

5. Write short notes on *any two* of the following: **(2×10=20)**
- (a) Methods of gene transfer in plants
 - (b) Transgenic Crops
 - (c) DNA fingerprinting
6. Explain the following statistical terms: **(4×5=20)**
- (a) Standard Deviation
 - (b) Degrees of freedom
 - (c) Null hypothesis
 - (d) Coefficient of variation
7. Write short notes on *any two* of the following: **(2×10=20)**
- (a) Photoperiodism and flowering
 - (b) Molecular mechanism of fruit ripening
 - (c) Physiological effects of auxins and their applications in agriculture
8. Write short notes on *any two* of the following: **(2×10=20)**
- (a) Electron transport chain in respiration
 - (b) Mechanism of biological nitrogen fixation
 - (c) Coenzymes

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