CSM : 24

BOTANY PAPER - II

Time Allowed : 3 hours | Maximum Marks : 100

QUESTION PAPER SPECIFIC INSTRUCTIONS

(Please read each of the following instruction carefully before attempting questions)

There are eight (8) questions - four (4) questions each in Part A & B. Each question carries 20 marks.

Marks for each question is indicated against it.

Compulsory questions :

(a) Question No. 1 from Part-A and

(b) Question No. 5 from Part-B

[Compulsory questions No. 1 & 5 have 4 (four) Sub-questions carrying 5 marks each.]

Total No. of questions to be attempted :

5 (five) questions.

[A candidate shall attempt 2 (two) compulsory questions from Part A and B. Out of the remaining 6 (six) questions, 3 (three) are to be attempted taking at least 1 (one) but not more than 2 (two) questions from each Part]

Word Limit:

(a) Compulsory questions carrying 5 marks shall have a limit of 150 words.

(b) There shall be no word limit for the remaining questions.

PART - A

1. Write short notes on the following : **(4×5=20)**
   (a) Structure and function of extracellular matrix
   (b) Environmental Protection Act
   (c) In situ conservation of biodiversity
   (d) Multiple alleles

2. What is extra-nuclear inheritance? With the help of suitable examples explain the phenomenon of extra-nuclear inheritance. **(4+16=20)**

3. What is pollution? Discuss the causes, effects and remedial measures of air pollution. **(2+7+7+4=20)**

4. What is global warming? Discuss in detail how the greenhouse effect plays an important role in the rise of the earth's temperature with a suitable diagram. **(2+18=20)**

PART - B

5. Write short notes on the following : **(4×5=20)**
   (a) Correlation and regression
   (b) Use of apomixis in plant breeding
   (c) Seed dormancy and its causes
   (d) Mechanism of enzyme action

6. Explain the concept of mutation in plants, their types and potential effects on plant phenotypes and fitness. **(5+15=20)**

7. Describe the electron transport chain (ETC) in the context of plant cellular respiration and photosynthesis. **(20)**

8. Calculate the standard deviation and coefficient of variation for the following set of data : 10, 12, 14, 16, 18. Interpret the meaning of standard deviation and coeffient of variation in the context of this data set. **(20)**

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