

CSM : 24

AGRICULTURE 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.
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PART - A

1. Write notes on the following: **(4×5=20)**
 - (a) Cytoplasmic Inheritance.
 - (b) Protection of plant varieties and Farmers' Rights Act (PPV & FR), 2001.
 - (c) Genetically modified crops.
 - (d) Photoperiodism.
2. What is mutation breeding? Describe in details, the method of mutation breeding and its role in crop improvement. **(5+10+5=20)**
3. What are the classes of seed and describe them? What are the different seed enhancement methods? Write short note on seed legislation and certification in India. **(8+6+6=20)**
4. Describe the importance of transgenics in agriculture and steps involved in processing transgenic event into commercial variety. Explain the different methods of gene transfer in plants. **(10+10=20)**

PART - B

5. Write notes on the following: **(4×5=20)**
 - (a) Plant quarantine
 - (b) The National Food Security Act, 2013.
 - (c) Protein Energy Malnutrition (PEM)
 - (d) Precision farming.
6. What is integrated pest management? Briefly explain its objectives, approaches and advantages. Describe the management strategies for fall armyworm in maize crop. **(5+10+5=20)**
7. Define protected cultivation and discuss its significance in modern agriculture. How does it contribute to enhancing crop yields and quality while minimizing environment impacts? **(10+10=20)**
8. Explain the Targeted Public Distribution System (TPDS). What are the key factors that hindered food production in Mizoram and what steps can be taken to improve food security in the state? **(5+8+7=20)**

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