

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Total No. of Pages : 02

Total No. of Questions : 09

B.Sc. (Agriculture) (Sem.-7)

**THEORY AND PRACTICES OF PLANT BREEDING**

Subject Code : BSAG-PGB-703

M.Code : 77099

Time : 3 Hrs.

Max. Marks : 90

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying THREE marks each.
2. SECTION-B contains FIVE questions carrying SEVEN AND HALF marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying FIFTEEN marks each and students have to attempt any TWO questions.

**SECTION-A****1. Write briefly :**

- a. Megasprogenesis
- b. Dichogamy
- c. Inbreeding Depression
- d. Genetic advance
- e. Chiasmogamy
- f. Inbred line
- g. Composites
- h. Physical mutagen
- i. DAALs
- j. Pure line

### SECTION-B

2. What is self-Incompatibility and its different types? How it can be exploited in crop improvement programme?
3. What is polyploidy breeding? Describe the methods of production of autopolyploid and their importance in crop improvement.
4. Define mutations. What are the various means of inducing mutations? List the achievements of mutation breeding in India.
5. Illustrate a generalized scheme for clonal selection in sugarcane. What are its merits and demerits?
6. What is recurrent selection? List the various types of recurrent selection. Which scheme do you prefer and why?

### SECTION-C

7. What is male sterility? List the various types of male sterility systems operating in plants. How CGMS is being used in developing hybrids in sorghum and rice?
8. Discuss in detail the pedigree method of handling the segregating generations along with its merits. Also mention any one of its modification in detail.
9. Describe the genetic basis of heterosis along with objections and explanations. Discuss the achievements in hybrid breeding in maize and pearl millet from Indian perspective.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**