

**Total No. of Pages : 02**

**Total No. of Questions : 09**

**B.Sc.(Agriculture) (2014 to 2018) (Sem.-5)**

# INTRODUCTION OF PLANT BREEDING

**Subject Code : BSAG-507**

**M.Code : 74171**

**Time : 3 Hrs.**

**Max. Marks : 60**

**INSTRUCTIONS TO CANDIDATES :**

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

## SECTION-A

**Q1. Write short notes on :**

- Megagametogenesis
- Adventive embryony
- Hybrid vigour
- Genetic load
- Over dominance
- Top cross
- Clonal selection
- Directed mutagenesis
- MAALs
- Bridging species

### SECTION-B

- Q2. Discuss various applications and limitations of distant hybridization in crop improvement.
- Q3. What is polyploidy breeding? Define heteroploidy and list various types of changes in chromosome number.
- Q4. Define Mutations. Briefly describe the characteristics of mutations and their effect on survival of organisms.
- Q5. What is a clone? What are the main characteristics of clones? Compare clones, Inbreds and pure lines.
- Q6. What is recurrent selection? List the various types of recurrent selection. Which scheme do you prefer and why?

### SECTION-C

- Q7. Explain the dominance and over dominance hypotheses of heterosis giving their main features, objections and answers to the objections. Which of the above two hypotheses is more widely accepted and why?
- Q8. What is back cross method of breeding? Explain the transfer of recessive gene (disease resistance) in to a cultivated variety of wheat which is susceptible to that particular disease.
- Q9. Define Autopolyploidy. Briefly describe the methods of production of autopolyploids and their importance and limitations in crop improvement.

**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.**