

**Roll No.**

**Total No. of Pages : 02**

**Total No. of Questions : 09**

**B.Voc. (Agriculture) (Sem.-3)**

# INTRODUCTION TO PLANT BREEDING

**Subject Code : BVAG-305-18**

**M.Code : 76778**

**Date of Examination : 17-01-2023**

**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

- 1. Write briefly :**
- a) Narrow sense heritability
  - b) Mass selection
  - c) Genetic advance
  - d) Hybrid vigour
  - e) Transgressive segregant
  - f) Top cross
  - g) Cybrid
  - h) Monohaploid
  - i) Embryo rescue
  - j) SCA

## **SECTION-B**

2. What is distant/wide hybridization? Explain briefly the various barriers and their solutions in wide hybridization.
3. What is allopolyploidy? Discuss the origin of wheat or brassica in detail.
4. Define mutation. What are the characteristics of mutations and their role in plant breeding?
5. What is apomixis? Apomixis can be beneficial as well as nuisance to a plant breeder, justify with suitable example.
6. What is hybrid breeding. Discuss the prospect and status of rice hybrids in India.

## **SECTION-C**

7. What is Reciprocal recurrent selection? Discuss the methodology employed for RRS and also mention their merits and demerits.
8. What is back cross method? How as a plant breeder, you can employ this method in transferring a recessive gene into a well-established variety. Explain it with example of your choice.
9.
  - a) What is a clone? What is clonal degeneration? What are the various factors responsible for it?
  - b) Discuss the single cross and double cross hybrids in maize.

**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.**