

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Sc.(Agriculture) (Sem.-5)
INTRODUCTION OF PLANT BREEDING

Subject Code : BSAG-507

M.Code : 74171

Date of Examination : 16-07-22

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 short notes on :

- a) Adventive embryony
- b) Mass selection
- c) Epistasis
- d) Progeny testing
- e) Transgressive segregant
- f) Back cross
- g) Multiline
- h) Double haploid
- i) Embryo rescue
- j) GCA.

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. 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?

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.