

Roll No. 

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

Total No. of Pages : 02

Total No. of Questions : 09

**B.Sc. (Agriculture) (Sem.-6)**  
**CROP IMPROVEMENT-II (RABI CROPS)**  
**Subject Code : BSAG606-19**  
**M.Code : 91797**  
**Date of Examination : 13-07-22**

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 briefly :
  - a. Anti-nutrition components of rabi fodders
  - b. Ideotype
  - c. CGMS system in Sunflower
  - d. Gene pool of Lentil
  - e. Meristem culture
  - f. Single vs. Double cross hybrids
  - g. Interspecific hybridization in berseem
  - h. Nobilization of cane
  - i. Antixenosis
  - j. Virulence vs. Avirulence.

## SECTION-B

2. Briefly discuss the breeding for oil quality in brassica.
3. What are the different alternative strategies (other than the conventional breeding tools) employed for developing varieties or cultivars?
4. Discuss in detail, the three lines system of hybrid seed production in Sunflower.
5. List few strategies one should adopt for developing climate resilient crop varieties.
6. Define mutation. What are the characteristics of mutations and their role in plant breeding?

## SECTION-C

7. What is back cross method of breeding? Discuss the methodology employed for introgression of recessive gene of disease resistance to a susceptible cultivar and also mention their merits and demerits.
8.
  - a. What are the objectives and future thrust points of lentil/gram breeding?
  - b. What can be the various breeding strategies used in berseem improvement?
9. What are biotic stresses? Enlist various abiotic stresses and their impact on yield and quality of brassica. What are the various resistance mechanisms one breeder should look for to develop resistant varieties against these biotic stresses?

**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.**