MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Hons.) Agriculture

Semester	: **V (New)**	**Term**	: **I**	**Academic Year**	: **2019-20**
Course No.	: GPB 355	**Title**	: **Crop Improvement –I (*Kharif* Crops)**		
Credits	: 2 (1+1)				
Day & Date	: Monday, 11.11.2019	**Time**	: 14.00 to 16.00	**Total Marks**	: **40**

Note :
1. Solve **ANY EIGHT** questions from **SECTION "A".**
2. All questions from **SECTION "B"** are compulsory.
3. All questions carry equal marks.
4. Draw neat diagrams wherever necessary.

SECTION "A"

Q.1 Define pollination. Describe various types of mode of pollination.

Q.2 Define Pedigree method of breeding. Explain the procedure of Pedigree method.

Q.3 What do you mean by transgenic plant? Discuss the applications of transgenic plants in crop improvement.

Q.4 Explain the various mechanisms of insect resistance in crop plants with the help of suitable example.

Q.5 Differentiate between

a) Qualitative traits and Quantitative traits. b) Mass selection and Pure line selection

Q.6 Define ideotype breeding. Describe the various steps in ideotype breeding.

Q.7 Write short notes :

a) Somatic hybridization b) Gene for gene hypothesis

Q.8 Describe the procedure for certified seed production in hybrid maize.

Q.9 Define drought resistance. Explain various mechanisms that contribute to drought resistance.

Q.10 Write the procedure of certified seed production of rice variety.

SECTION "B"

Q.11 Define the following terms.

1) Germplasm 2) Modifying gene

3) Genetic erosion 4) Hybrid

Q.12 Do as directed.

1) *Nicotiana tabacum* cultivated species derived from_____ and _____ species.

2) Give the botanical name of the following crops.

a) Finger millet b) Pomegranate

3) Name the systems used for hybrid seed production of rice.

4) Complete the following table.

Sr.No.	Crop	Origin
1)	Castor	
2)	Groundnut	

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