MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END THEORY EXAMINATION

B.Sc.(Hons.) Agriculture

Semester	: V (New)	Term	: First	Academic Year	: 2023-24
Course No.	: GPB 355	Title	: Crop Improvement-I (*Kharif* Crops)		
Credits	: 2 (1+1)				
Day & Date	: Tuesday, 12.12.2023	Time	: 14:00 to 16:00 hrs.	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 diagram wherever necessary.

SECTION 'A'

Q.1 Define Plant Genetic Resources. Enlist different activities of Plant Genetic Resources. Explain in brief Germplasm conservation.

Q.2 Define Biotic stress. Explain in brief different mechanisms of insect resistance in crop plant.

Q.3 Define Genetic resistance. Differentiate between vertical and horizontal resistance.

Q.4 Define Ideotype. Enlist different factors affecting ideotype breeding. Describe main features of ideotype breeding in wheat.

Q.5 Define Drought resistance. Enlist briefly the various morphological and physiological characters associated with drought resistance.

Q.6 Explain in brief hybrid seed production in rice.

Q.7 Explain in brief different agronomic principles of seed production of self-pollinated crops.

Q.8 Write short notes on (Any Two):

a) Back cross method

b) Centers of origin

c) Nilsson-Ehle's multiple factor hypothesis

Q.9 Enlist different methods of plant breeding and discuss the pedigree method with suitable example.

Q.10 Complete the following table :

Crop	Origin	Botanical name	Wild relatives	Improved varieties
Maize				
Pigeon pea				

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SECTION 'B'

Q.11 Fill in the blanks:

1) Central Soil Salinity Research Institute is located at _____.

2) _____ accumulation in plant is associated with drought tolerance.

3) The term 'Ideotype' was coined by _____ in 1968, while working on wheat.

4) In finger millet, maximum opening of flowers is between _____time.

Q.12 Define the following terms:

1) Water spenders

2) Threshold character

3) Recalcitrant seed

4) Quincuncial aestivation

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