MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END THEORY EXAMINATION
B.Sc.(Hons.) Agriculture

Semester	: V (New)	Term	: First	Academic Year	: 2022-23
Course No.	: GPB 355	Title	: Crop Improvement–I (*Kharif* Crops)		
Credits	: 2(1+1)				
Day & Date	: Wednesday, 08.02.2023	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 Describe hybrid seed production technology in rice.

Q.2 Describe different mechanisms of disease resistance in crop plants.

Q.3 Define plant genetic resources. Explain in brief kinds of germplasm.

Q.4 Define back cross. Explain the procedure of back cross breeding method for transfer of dominant trait.

Q.5 Describe the different morphological characters associated with drought resistance.

Q.6 Give the botanical name and centre of origin of the following crops:

a) Rice b) Pigeon pea c) Soybean d) Sunflower

Q.7 Write breeding objectives of maize. Describe the development of synthetic variety.

Q.8 Define emasculation. Describe the different methods of emasculation.

Q.9 Give important features of ideotype for sorghum and cotton.

Q.10 Differentiate between (Any Two):

a) Qualitative and Quantitative traits

b) Pure line selection and Mass selection

c) Vertical and Horizontal resistance

SECTION 'B'

Q.11 Define the following terms:

1) Expressivity

2) Acclimatization

3) Hybrid

4) Obsolete cultivar

Q.12 Fill in the blanks:

1) Toxic substance present in cotton is _____.

2) Mass selection is a mixture of several _____.

3) In hybrid seed production technology, certified seed production programme involves crossing of _____ and _____ lines.

4) _____ and _____ mechanisms promote cross pollination in maize.

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