

**MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE**  
**SEMESTER END EXAMINATION**

**B.Sc. (Agri.)**

<b>Semester</b> : IV (New)	<b>Term</b> : II	<b>Academic Year</b> : 2015-16
<b>Course No.</b> : BOT 245	<b>Title</b> : Breeding of Field and Horticultural Crops	
<b>Credits</b> : 3 (2+1)		
<b>Day &amp; Date</b> : Monday, 02.05.2016	<b>Time</b> : 14.00 to 17.00	<b>Total Marks</b> : 80

- 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 germplasm. Enlist kinds of germplasm and describe various methods of germplasm conservation.
- Q.2 Define recurrent selection. Give its types and explain reciprocal recurrent selection.
- Q.3 Describe the characteristics of plant ideotype. Explain the important features of plant ideotype for cotton.
- Q.4 Enlist breeding methods used in self and cross pollinated crops. Explain in detail pure line selection method.
- Q.5 Define genetic resistance. Describe different sources used in developing disease resistance.
- Q.6 What is combining ability? Describe the types of combining ability.
- Q.7 Define heterosis. Enlist factors affecting the magnitude of heterosis. Describe in detail estimation of heterosis.
- Q.8 What is mutation breeding? Explain in detail the procedure for mutation breeding.
- Q.9 Complete the following table

Sr. No.	Crop	Botanical Name	Family	Origin	Chromosome No.
1)	Maize				
2)	Soybean				
3)	Desi Cotton				
4)	Brinjal				

- Q.10 Write short notes on (Any two).
- 1) Multiple factor hypothesis
  - 2) Heritability
  - 3) Intellectual Property Rights (IPR)

**SECTION "B"**

- Q.11 Define the following terms.
- 1) Distant hybridization
  - 2) Inbred
  - 3) Plant introduction
  - 4) Horizontal resistance
  - 5) Back cross
  - 6) Stress
  - 7) Stability
  - 8) Polyploidy
- Q.12 Give full form of the following.
- 1) CICR
  - 2) IPGRI
  - 3) IRRI
  - 4) CAZRI
  - 5) IARI
  - 6) CRIDA
  - 7) IIHR
  - 8) NBPGR

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