MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester	: IV (Old)				
Course No.	: BOT 245	**Term**	: II	**Academic Year**	: 2018-19
Credits	: 3 (2+1)	**Title**	: Breeding of Field and Horticultural Crops		
Day & Date	: Wednesday, 08.05.2019	**Time**	: 09.00 to 12.00	**Total Marks**	: 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 Write botanical name, chromosome number, family and breeding objectives of following crops (Any two).

a) Finger millet b) Guava c) Chilli

Q.2. Enlist breeding methods in autogamous crops. Explain pedigree method of breeding.

Q.3 Define ideotype. Give different types of ideotype. Describe main features of ideotype breeding.

Q.4 Explain in brief.

a) IPR b) Germplasm

Q.5 a) Explain mechanism for insect resistance.

b) Describe sources of disease resistance in crop plants.

Q.6 a) Describe simple measures of variability used for assessing the variability of germplasm.

b) Define combining ability and give its types.

Q.7 Define Drought resistance. Explain morphological characters associated with Drought resistance.

Q.8 What is clonal selection? Describe the method for clonal selection along with it's merits and demerits.

Q.9 a) Define stability. Enlist different models of stability analysis and give its significance in plant breeding.

b) Enlist breeding objectives of Rose

Q.10 a) Explain gene for gene hypothesis.

b) Enlist hurdles in breeding for salinity resistance.

(P.T.O.)

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SECTION "B"

Q.11 Define the following terms.

1) Recurrent parent
2) Pathotype
3) Biometrics
4) Mutation
5) Inbreeding depression
6) Hardy weinberg law
7) Gene bank
8) Stress

Q.12 Give full form of the following.

1) UPOV
2) IPGRI
3) CRRI
4) ICARDA

b) Fill in the blanks.

1) Jute belongs to family _____.

2) Individuals with unlike alleles at the corresponding loci are known as _____.

3) Headquarter of UPOV is at_____.

4) The term ideotype was first proposed by _____.

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