MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION
B.Sc. (Agri.)

Semester	**: III (New)**	**Term**	**: I**	**Academic Year**	**: 2016-17**
Course No.	**: BOT 233**	**Title**	**: Principles of Plant Breeding**		
Credits	**: 3(2+1)**				
Day & Date	**: Saturday, 19.11.2016**	**Time**	**: 9.00 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 Define plant breeding. Describe various objectives of plant breeding with suitable examples.

Q.2 Enlist different breeding methods for self and cross pollinated crops. Explain mass selection method with its merits and demerits.

Q.3 What is recurrent selection? Enlist different types of recurrent selection. Explain simple recurrent selection.

Q.4 Define male sterility. Enlist different types of male sterility and explain cytoplasmic genetic male sterility with its merits and demerits.

Q.5 What is polyploidy? Give the classification of polyploidy and explain autopolyploidy.

Q.6 Define mutation. State different types of mutation and explain the procedure of mutation breeding.

Q.7 What is emasculation and pollination? Explain different methods of emasculation with suitable examples.

Q.8 What is self incompatibility? Give the different types of self incompatibility and explain heteromorphic self incompatibility.

Q.9 Define pure line selection. Describe in brief Johannsen pure line theory.

Q.10 Write short notes (Any four).

1) Synthetic variety
2) Transgressive breeding
3) Apomixis
4) Plant introduction
5) Role of wide hybridization in crop improvement.

SECTION "B"

Q.11 Define the following terms

1) Cliestogamy
2) Hermaphrodite
3) Allogamy
4) Hybridization
5) Clone
6) Composite variety
7) Heterobeltoisis
8) Euploidy

Q.12 Give contribution of the following scientists.

1) G.H .Shull
2) N.I.Vavilov
3) Thomas Fairchild
4) C.H.Goulden
5) K.Ramaiah
6) C.T.Patel
7) Rimpu
8) M.S.Swaminathan

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