

# KERALA AGRICULTURAL UNIVERSITY

B.Sc (Hons.) Agriculture 2015 Admission  
III<sup>rd</sup> Semester Final Examination-February-2017



Cat. No: Pbgm-2103  
Title: Principles of Plant Breeding (2+1)

Marks: 50.00  
Time: 2 hours

(10x1=10)

## I Fill up the blanks

1. Indian Institute of Spices Research (IISR) is located at -----
2. The process of formation of somatic embryo from the callus is called -----
3. Distyly is common in family -----
4. ----- proposed the theory of centre of origin.
5. The Royal Botanic garden is located at -----
6. Cleistogamy is found in family -----
7. Multilines are developed through ----- method of breeding.
8. ----- proposed the Pureline theory.
9. Head quarters of CIMMYT is -----
10. ----- is the condition where pollen from a flower of one plant falls on the stigma of other flower of the same plant.

## II Differentiate between any FIVE of the following

(5x2=10)

1. Trisomi / Nullisomi
2. Heterosis / inbreeding depression
3. Genetic Male Sterility (GMS) / CMS
4. Micro centre / Secondary centre
5. Self incompatibility / Male sterility
6. Synthetic variety/transgenic variety
7. Convergent cross/Double cross

## III Write short answers on any FIVE

(5x4=20)

1. Describe the method of recurrent selection in population improvement.
2. Define polyploidy? How aneuploids differ from euploids.
3. What is called self incompatibility? Name the technique to overcome self incompatibility.
4. Importance of mutation breeding in crop improvement.
5. Describe the development of single cross hybrids.
6. Compare pure line selection with mass selection.
7. Importance of auto polyploids in plant breeding.

## IV Write essay on any ONE

(1x10=10)

1. Explain different methods of breeding for vegetatively propagated plants.
2. What are the different steps involved in the evolution and release of a new variety through hybridization and selection?

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