



KERALA AGRICULTURAL UNIVERSITY  
B.Sc (Hons.) Agriculture 2016 Admission  
II Semester Final Examination-August-2017

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Pbgn.1202

Fundamentals of Plant Breeding (2+1)

Marks: 50

Time: 2 hours

**I Fill up the blanks (10x1=10)**

- 1 Genetic constitution of cross pollinated population is -----
- 2 Sum total of genes in a species refers to -----
- 3 An example for often cross pollinated crop-----.
- 4 Distyly is common in family -----
- 5 A crop which originated in USA centre of origin-----

**State True/False**

- 6 The International Atomic Energy Agency (IAEA) is located at Austria.
- 7 Single seed descent is the most exploited method for cross pollinated crops.
- 8 IR8 is the first rice hybrid released in India.
- 9 CGMS system is the most commercially exploited male sterility system in rice.
- 10 The gene for gene hypothesis was proposed by Russell.

**II Write short notes on any FIVE (5x2=10)**

- 1 Clone
- 2 Acclimatization
- 3 Mutagens
- 4 Geitonogamy
- 5 Hardy Weinberg Law
- 6 Farmer's Right
- 7 Marker Assisted Selection

**III Answer any FIVE (5x4=20)**

- 1 Define heterosis. Write the theories of heterosis with suitable examples.
- 2 Compare and contrast between bulk method of breeding and pureline selection.
- 3 Write the differences in genetic constitution of self and cross pollinated crops with suitable examples.
- 4 Elucidate the mechanisms promoting cross pollination.
- 5 Define mutation. Write the procedure for handling mutagenic population.
- 6 Back cross breeding.
- 7 Classify Self Incompatibility and list the measures in overcoming the same.

**IV Write essay on any ONE (1x10=10)**

- 1 Define and classify male sterility. Discuss its relevance in plant Breeding
- 2 Define ploidy. Write an essay on different types of polyploids with examples.

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