



KERALA AGRICULTURAL UNIVERSITY
B.Sc. (Hons.) Ag. 2016 Admission
IV Semester Final Examination-July-2018

bgn.2204

Crop Improvement - II (1+1)

Marks: 50
Time: 2 hours
(10x1=10)

I Define the following

- 1 Acclimatization
- 2 Law of Homologous Series
- 3 Self incompatibility
- 4 Transgressive segregation
- 5 Multilines
- 6 Shuttle breeding
- 7 Recurrent selection
- 8 Gamma garden
- 9 Vertical resistance
- 10 Ideotype

Write Short notes on ANY FIVE of the following

(5x2=10)

- 1 Compare natural selection and artificial selection with respect to variation.
- 2 Which are the centers of origin of the following crops
a Cardamom b Cocoa c Rubber d Pepper
- 3 List different sources of genetic variation in purelines.
- 4 List various mechanisms which promote cross pollination.
- 5 Differentiate Qualitative and quantitative characters.
- 6 Describe the importance of wild species in crop improvement.
- 7 List different methods to improve the characteristics of the inbreds.

III Answer ANY FIVE of the following

(5x4=20)

- 1 Describe patterns of evolution in crop plants.
- 2 List different purposes of introduction with suitable examples.
- 3 Explain Noblization of sugarcane.
- 4 What are the applications of backcross programme and describe the procedure in the transfer of recessive gene.
- 5 List different recurrent selection schemes and describe reciprocal recurrent selection.
- 6 Describe Gene-for –Gene relationship between a host and its pathogen.
- 7 Describe different operations in the production of hybrid varieties.

IV Write an essay on ANY ONE of the following

(1x10=10)

- 1 List different sources of resistance to insect pests. Describe screening techniques and what the problems in breeding for insect resistance.
- 2 Describe origin, distribution, breeding objectives and crop improvement efforts in mango, cashew and banana.
