

KERALA AGRICULTURAL UNIVERSITY  
B.Sc. Hons. (Agriculture) – 2007 Admission - V<sup>th</sup> Semester  
Final Examination - January 2010

Cat. No. : Pbgp 3104  
Title : Breeding of Crops and  
Intellectual Property Rights (2+1)

Max. marks: 80  
Time : 3 hours

I. Fill up the blanks / State True or False 10 x 1 = 10 Marks

Fill up the blanks

1. The two cultivated species of rice are ----- and -----.
2. Dwarfing gene in wheat is -----.
3. ----- is the father of hybrid rice.
4. Emmer wheat cultivated in south India is botanically called as -----.
5. ICRISAT is located in -----.

State True or False

6. Centre of origin of crop plants suggested by Vavilov did not cover Australia.
7. In bajra, protandry is responsible for cross pollination.
8. Top cross is a cross between two open pollinated varieties.
9. Copy right gives protection for 15 years.
10. In back cross breeding for disease resistance, recipient parent is used as recurrent parent.

II. Write short notes/answers on ANY TEN 10 x 3 = 30 Marks

1. What is two line breeding?
2. What is unpredictable legume? Why is it so called?
3. Explain any three lint quality parameters of cotton.
4. Brief 'Hardy – Weinberg law'.
5. How red gram differs from cultivated *Vigna* group of plants in terms of flowering habit, duration and mode of pollination?
6. Mention any three cucurbit vegetables with their botanical names and mode of pollination.
7. Write a short note on antixenosis with an example.

8. Brief 'Gene for Gene hypothesis'.
9. Write in short about any three physiological mechanisms of drought tolerance.
10. Name any three popular varieties of pepper along with their special characters.
11. What are the different epistatic interactions possible in biometrical genetics?
12. What is meant by Geographical indication of goods?

III. Write short essays on ANY SIX of the following.

6 x 5 = 30 Marks

1. Discuss the breeding methods of tomato.
2. What is distant hybridization? How is it useful in crop improvement? Give two examples.
3. Discuss the breeding methods of papaya.
4. What are the quality parameters of cocoa?
5. Write the classification of cowpea. What are the desirable qualities of vegetable cowpea?
6. Discuss the current status of hybrid rice in India.
7. Explain the activities of NBPGR.
8. Discuss the Farmers' rights envisaged in PPV & FR Act, 2001.

IV. Write essays on ANY ONE

1 x 10 = 10 Marks

1. What is heterosis breeding? What are the theories explaining heterosis? How is heterosis exploited in maize and tomato?
2. Discuss the breeding objectives and breeding methods of any four major flower crops.