

15014(OR)

M.Sc., DEGREE EXAMINATION, OCTOBER/NOVEMBER 2015
FIRST SEMESTER

Botany

Paper IV – Genetics and Plant Breeding

Time: Three hours

Max. Marks: 75

(No additional sheet will be supplied)

PART A- (5 x 3 = 15 marks)

Answer any FIVE questions.

Each question carries 3 marks.

Each answer should not exceed 1 page

1. Co- dominance
2. Gene interaction
3. Double crosses
4. Molecular markers
5. Hardy and Weinberg equilibrium
6. Population genetics
7. Polyploidy
8. Breeding in rice

PART B - (4 x 15 = 60 marks)

Answer ALL questions.

Each question carries 15 marks.

Each answer should not exceed 6 pages

9. Write an account on Mendelian principles
(or)
10. Discuss about the chromosome as a linkage unit
11. Write a note on the factors affecting the recombination
(or)
12. Describe the development of mapping population in plants
13. Write a note on structural and numerical alterations of chromosomes
(or)
14. Mention the types of mutations and how to detect the mutations
15. Write a brief account on how to get high yielding and disease resistant plant through breeding
(or)
16. What is the role of induced mutations in crop improvement