Reg. No..... Name.....

B.SC. DEGREE END SEMESTER EXAMINATION OCTOBER 2016

SEMESTER – 5: BOTANY (CORE COURSE)

COURSE: U5CRBOT7– GENETICS, PLANT BREEDING AND HORTICULTURE

Time: Three Hours Max. Marks: 60

PART A

I Answer **ALL** questions; each questions carriers ONE marks

1. Define interference
2. What is emasculation?
3. Explain the genetic Principle of AB Blood Group.
4. What are lethal genes?
5. What is mass selection?
6. What are chemical mutagens?
7. What is a test cross?
8. What is the genetics of Hairy pinnae?

(1 x 8 = 8)

PART B

II Answer **ANY SIX** Questions, each question carries TWO Marks

9. Explain layering
10. Explain Law of segregation with an example
11. What is complementary gene inheritance?
12. How is Chiasma formed?
13. What are tandem fusions?
14. What is seed testing?
15. What is quarantine?
16. Why the quantitative traits are also called as metric traits?
17. What are Barr bodies?
18. What is Gama garden?

(2 x 6 = 12)

PART C

III Answer **ANY FOUR** questions; each question carries FOUR marks

19. Explain the phenotypic ratio 9:3:4
20. Describe the vegetative propagation of horticulture plants
21. Describe the chromosomal sex determination.
22. What are Bonsai?
23. State Hardy-Weinberg Law.

24. Explain the use of apomixis in plant breeding.

(4 x 4 = 16)

PART D

IV Answer **ANY TWO** question carries TWELVE marks

25. Write an essay on mutation breeding and its achievements in India.

OR

26. What are GM crops? How it affects the horticultural crops in the country?

27. What is crossing over? How Stern's experiment helped in proving the cytological basis of crossing over?

OR

28. Give an account of extra nuclear inheritance.

(12 x 2 = 24)