

TB145110B

Reg. No.....

Name.....

B. Sc. DEGREE (C.B.C.S.S.) EXAMINATION, APRIL 2017
Supplementary – 2014 Admission
SEMESTER V - CORE COURSE (BOTANY)
BOT5GPH - GENETICS, PLANT BREEDING AND HORTICULTURE

Time: Three Hours

Maximum Marks: 60

PART A

I. Answer all questions. Each question carries 1 mark.

1. What are alleles?
2. Define co-dominance.
3. Write down the genetic constitution of an individual with Klinefelter's syndrome.
4. State Hardy Weinberg law.
5. Expand NBPGR.
6. Define Hybridization.
7. What is meant by seed dormancy?
8. What is meant by pruning?

(8 x 1 = 8)

PART B

II. Answer any six questions. Each question carries 2 marks.

9. What is meant by incomplete dominance? Explain it with the help of an example
10. Explain the inheritance of human blood group
11. Briefly explain quantitative characters?
12. What is meant by crossing over? What are its significances?
13. Mention any four objectives of plant breeding
14. Distinguish between purelines and clones
15. Write a short note on Gamma garden
16. What are mist chambers? Explain its role in horticulture.
17. Mention the advantages and disadvantages of seed propagation
18. Briefly explain lawn mowing.

(6 x 2 = 12)

PART C

III. Answer any four questions. Each question carries 4 marks.

19. What is meant by dihybrid cross? Find out the typical Mendelian dihybrid phenotypic ratio using a checker board of a suitable dihybrid cross.
20. Explain the inheritance of haemophilia in man. Why is it more frequent in males?
21. What is meant by extra nuclear inheritance? Explain the inheritance of plastids in *Mirabilis*?
22. Write a short note on plant introduction mentioning its procedure.
23. Define heterosis. Explain the genetic basis of heterosis.

24. What is meant by seed testing? Briefly explain the different seed tests used for seed certification.

(4 x 4 = 16)

PART D

IV. Answer any two questions. Each question carries 12 marks.

25. Write an essay on epistasis and its classification citing suitable examples.
26. Explain the chromosomal mechanism of sex determination. Add a note on the sex determination mechanism in *Drosophila* and *Melandrium*.
27. What is mass selection? Explain the procedure of mass selection and mention its merits and demerits.
28. Write an essay on the various artificial vegetative propagation methods in plants.

(2 x 12 = 24)