TB256449T

Reg. No :.....

Name :.....

BACHELOR'S DEGREE (C.B.C.S) EXAMINATION, MARCH 2025

2018, 2019, 2020, 2021 ADMISSIONS SUPPLEMENTARY

SEMESTER VI - CORE COURSE (BOTANY)

BO6B09B18 - Genetics, Plant Breeding and Horticulture

Time : 3 Hours **Maximum Marks : 60**

Part A

I. Answer any Ten questions. Each question carries 1 mark **(10x1=10)**

1. Differentiate homozygous and heterozygous genotypes with examples.
2. Distinguish genotype and phenotype with examples.
3. State Hardy- Weinberg law.
4. Define polygenic inheritance? Give an example.
5. What is sex limited inheritance? Give an example.
6. Define back cross.
7. Give the definition of pureline?
8. What are allopolyploids?
9. What is nursery stocking?
10. What are the uses of spade in horticulture?
11. What is topiary?
12. What are hedges?

Part B

II. Answer any Six questions. Each question carries 5 marks **(6x5=30)**

13. State the laws of inheritance put forth by Mendel regarding monohybrid and dihybrid crosses.
14. What is the genic interaction seen in coat colour in mice? Explain the F2 modified ratio.
15. Describe the pattern of inheritance determining ear length in maize.
16. What are kappa particles? How are they inherited in Paramecium?
17. Describe heterosis in plant breeding.
18. Give an account on mist chambers.
19. Give an account on seed certification.
20. Write a short note on ornamental gardening.
21. How do you set up a terrace garden? What are its advantages?

Part C

III. Answer any Two questions. Each question carries 10 marks **(2x10=20)**

22. With examples, illustrate the XX-XY and XX-XO mechanisms of sex determination.
23. Explain the procedure and advantages of pollen culture.
24. Give an account on plant propagation through layering using diagrams.
25. Write an essay on plant growing structures used for providing controlled environment to the plants.