

2022
B.A./B.Sc.
Fifth Semester
DISCIPLINE SPECIFIC ELECTIVE – 1
BOTANY
Course Code: BOD 5.11
(Plant Breeding)

Total Mark: 70
Time: 3 hours

Pass Mark: 28

Answer five questions, taking one from each unit.

UNIT-I

1. Give an account on the importance of plant breeding in modern agriculture. What are the undesirable consequences of plant breeding? 10+4=14
2. What are the different modes of reproduction in plants? Give a brief account on the contrivances of self and cross pollination. 6+4+4=14

UNIT-II

3. Give an account on Vavilov's centres of origin of cultivated crop, and its limitations. 10+4=14
4. (a) What is hybridization? Give an account on the different types of hybridization. 2+8=10
(b) Write a note on the importance and domestication of crop plants. 4

UNIT-III

5. Write short notes on the following: 7×2=14
 - (a) Concept of qualitative and quantitative inheritance
 - (b) The quantitative inheritance with the example of kernel colour in wheat and express the ratio (1:4:6:4:1)
6. Give an account on the inheritance of skin colour in man with examples.

UNIT-IV

7. Define inbreeding depression. Write notes on the degrees of inbreeding depression. 2+12=14
8. Explain in detail the inbreeding depression and heterosis with appropriate hypothesis. 14

UNIT-V

9. Discuss the origin and production of allopolyploids. Mention the applications of allopolyploids in crop improvement. 8+6=14
 10. Write notes on distant hybridization and its techniques for production of distant hybrids. 14
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