

**2023**  
**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 various modes of reproduction in crop plants. 14
2. Write notes on the following: 8+6=14
  - (a) Objectives and achievements in plant breeding
  - (b) Undesirable consequences of plant breeding

**UNIT-II**

3. Give an account on the various centers of origin of crop plants. Why is it limited? 10+4=14
4. Give a general account on the following: 8+6=14
  - (a) Hybridization methods in cross pollinated crops
  - (b) Domestication of crop plants

**UNIT-III**

5. Differentiate between monogenic and polygenic inheritance with appropriate examples. 14
6. Give an account on the following: 7×2=14
  - (a) Inheritance of kernel colour in wheat
  - (b) Inheritance of skin colour in man

## UNIT-IV

7. Write a note on genetic basis of heterosis. Discuss the applications of heterosis in plant breeding. 9+5=14
8. What is inbreeding? Explain the methods of inbreeding. 14

## UNIT-V

9. Describe distant hybridization. Explain the types of distant hybridization with examples. 14
10. Write notes on the following: 7×2=14
- (a) Role of mutation in plant breeding
  - (b) Production of allopolyploids
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