

3 MJ 60307

THREE YEAR B.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER/DECEMBER 2024.

THIRD SEMESTER

Botany (Major)

Course 7 – PLANT BREEDING

(w.e.f. 2023-24)

Time : Three hours

Maximum : 70 marks

(No additional sheet will be supplied)

PART A — (5 × 4 = 20 marks)

Answer any FIVE of the following questions.

1. Heritability
2. Apomixis
3. Male sterility
4. Domestication of plants
5. Basic principles Selection
6. Clonal selection
7. Heterosis
8. Epistasis
9. Simple Sequence Repeats (SSR)
10. Types of Polyploidy

PART B — (5 × 10 = 50 marks)

Answer ALL of the following questions.

11. Classification of crop plants based on mode of Pollination and Reproduction.
Or
12. Explain Advantages and disadvantages of asexual and sexual reproduction.
13. Explain the exploitation of self-incompatibility in hybrid production.
Or
14. Describe centres of origin of crop plants.

15. Define Selection. Write about natural and artificial selection Methods.

Or

16. Define Clonal selection. Write its procedure, advantages and disadvantages, achievements.

17. What is back cross method? Explain procedure, advantages and disadvantages.

Or

18. What is composite variety? – Merits, demerits and achievements.

19. Marker Assisted Selection (MAS) and its applications in plant breeding.

Or

20. Explain DNA markers and their applications in plant breeding.
