

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai — 600 044.

B.Sc. END SEMESTER EXAMINATIONS NOVEMBER-2022

SEMESTER - V

20UPBCT5009 - Genetics and Plant Breeding

Total Duration : 2 Hrs 30 Mins.

Total Marks : 60

Section A

Answer any **SIX** questions ($6 \times 5 = 30$ Marks)

1. Why did Mendel use pea plant as an experimental material in his experiments?
2. Distinguish between crossing over and linkage maps.
3. Prepare notes on significance of Hardy Weinberg Law.
4. What is heterosis and what are its manifestations? How has this phenomenon been utilized in plant breeding.
5. Compare Hemophilia and Hypertrichosis.
6. Classify the different types of gene mutation.
7. Explain briefly about DNA fingerprinting.
8. Distinguish between allopolyploidy and autopolyploidy.

Section B

Answer any **THREE** questions ($3 \times 10 = 30$ Marks)

9. Explain Mendel's laws of inheritance. Elaborate on their importance in inheritance.
10. Interpret extra-nuclear inheritance with an example.
11. Distinguish Klinefelter, Down and Turner Syndrome.
12. Prepare short notes on a) gene therapy
b) DNA probe c) genomic library
13. Evaluate on the role of breeding involved in release of mutagenic varieties.

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