

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.PBPBT - END SEMESTER EXAMINATIONS - NOV'2024

SEMESTER - V

**20UPBCT5009 - Genetics and Plant Breeding**

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

### Section B

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

1. Explain Incomplete dominance and Codominance citing examples.
2. Illustrate Maternal Inheritance in *Mirabilis jalapa*
3. Relate Klinefelter's and Turner's Syndrome.
4. Sketch the different types of hybridization techniques in plant breeding.
5. Describe one gene-one enzyme hypothesis.
6. Classify the various numerical aberrations of chromosomes.
7. Show the ethical issues associated with gene therapy.
8. Examine the role of polyploidy in plant breeding.

### Section C

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

9. Interpret the concept of multiple alleles with examples.
10. Prepare a detailed account on crossing over and types of crossing over.
11. Distinguish various structural chromosomal changes in organisms.
12. Analyze Hardy Weinberg principle in population genetics.
13. Assess the methods of selection in plant breeding.

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