

**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 APRIL-2022

SEMESTER - V

16UPBCT5A09 & UPB/CT/5A09 - Genetics and Plant Breeding

Total Duration : 3 Hrs.

Total Marks : 60

Section A

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

1. Explain monohybrid cross with an example.
2. Give an account on polygenic inheritance.
3. What is extranuclear inheritance? Explain the inheritance of plastids in *Mirabilis*.
4. Write a note on linkage and crossing over and its significance.
5. Explain multiple alleles with an example.
6. Write a note on Down's syndrome.
7. State Hardy Weinberg law and explain.
8. Define heterosis and write the steps in hybrid seed production.

Section B

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

9. Write an account on sex linked inheritance of Haemophilia and Colour blindness.
10. Explain gene therapy and its applications.
11. Write an essay on the types of chromosomal mutations.
12. Give an account on polyploidy and its applications and limitations in plant breeding.
13. Explain the types of mutation plant breeding methods and its applications.
