

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 EXAMINATION APRIL/NOV - 2021
SEMESTER - V

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

Total Duration : 3 Hrs	Total Marks : 75
MCQ : 30 Mins	MCQ : 15
Descriptive : 2 Hrs.30 Mins	Descriptive : 60

Section B

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

1. Explain dihybrid cross using an example.
2. Describe sex determination in plants.
3. What is gene therapy? Enumerate its advantages and disadvantages.
4. Briefly discuss Down's Syndrome.
5. Differentiate the pureline and mass selection process.
6. Explain plastid inheritance seen in *Mirabilis*
7. Give an account of the various mutagenic agents and mention its significance.
8. What is Heterosis and write a note on hybrid seed production.

Section C

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

9. Describe the genic interaction seen in Supplementary genes using an example.
10. Discuss in detail sex linked inheritance seen in Haemophiliacs.
11. With schematic diagrams describe crossing over.
12. Explain DNA fingerprinting with a flowchart.
13. Critically evaluate the application of the different types of polyploidy in plant breeding