

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

16UPBCT5A09 - 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. Describe the test cross and back cross with suitable example.
2. Explain Plastid Inheritance in *Mirabilis jalapa* with suitable diagrams
3. Classify the different type of Mutagenic agents and its significance.
4. Germplasm conservation is an instrumental in Agriculture - Justify the statement.
5. Enumerate the difference between Autopolyploidy and Allopolyploidy.
6. Describe allelic and nonallelic gene with suitable diagrams.
7. Illustrate the Male sterility in Zea mays with suitable diagrams.
8. Differentiate between mass selection and pure line selection.

Section B

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

9. Describe the polygenic inheritance with suitable examples.
10. Relate colour blindness with sex inheritance and describe different types of colour blindness with suitable examples.
11. Explain chromosome mapping and its significance role in the modern science.
12. Write an essay on the DNA finger printing and its applications.
13. Assess the role of male sterility and its commercial exploitation in plant breeding.

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