B.Sc. DEGREE EXAMINATION,APRIL 2020
III Year V Semester
Genetics and Plant Breeding

Time : 3 Hours **Max.marks :75**

Section A $(10 \times 2 = 20)$ Marks

Answer any **TEN** questions

1. Lethal factor.
2. Test cross.
3. Hypertrichosis
4. Holandric genes
5. Mutagen
6. Down's Syndrome.
7. Endonuclease
8. DNA
9. Transposons
10. Mutagenic variety.
11. Heterosis
12. DNA probe

Section B $(5 \times 5 = 25)$ Marks

Answer any **FIVE** questions

13. Explain Supplementary gene interaction with an example.
14. Write short notes on sex determination in plants.
15. Illustrate and explain the concepts of crossing over.
16. Write short notes on gene therapy.
17. Briefly explain ploidy and its application in plant breeding.
18. With examples explain polygenic inheritance.
19. Briefly describe the characteristics features of Klinefelter's syndrome.

Section C $(3 \times 10 = 30)$ Marks

Answer any **THREE** questions

20. Write in detail about the gene interaction seen in Epistasis using an example.
21. Explain sex linked inheritance using examples.
22. Describe the various types of gene and chromosomal mutations.
23. Give a detailed account on DNA fingerprinting.
24. Elaborately write about the various methods of selection in plant breeding.

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