M.Sc. DEGREE EXAMINATION,NOVEMBER 2018
II Year III Semester
Core Major -VI
GENETICS, PLANT BREEDING AND EVOLUTION

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

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

Answer any **TEN** questions

1. Holandric gene
2. Chiasmata
3. Genome
4. β- galactosidase
5. Chromosomal aberration
6. Clastogens
7. Clone
8. Tryptophan operon
9. Inbreed
10. Tetrazolium test
11. H De Vries
12. Variation

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

Answer any **FIVE** questions

13. Explain the non-Mendelian inheritance with an example.
14. Write short notes on Britten and Davidson model.
15. Explain the technique of gene mapping.
16. Write notes on breeding for diseases resistance.
17. Give a brief account on physical mutagens.
18. Briefly discuss the genetic basis of Heterosis
19. Write brief notes Species adaptation and selection.

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

Answer any **THREE** questions

20. Describe the sex-linked disease inheritance with two suitable examples.
21. Explain the mode of gene regulation in prokaryotes.
22. Write an account on classification and characterization of mutation.
23. Discuss the modern methods of plant breeding for the crop improvement.
24. Write notes on: a) Theory of Lamarkism b) Modern synthetic theory.

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