M.Sc. DEGREE EXAMINATION,NOVEMBER 2018
I Year I Semester
Core Elective -I
STATISTICAL GENETICS

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

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

Answer any **TEN** questions

1. Define Genetic map.
2. Why Chromosomes are considered as a physical basis of heredity?
3. Define Homozygous and Heterozygous.
4. Distinguish between epistasis and dominance.
5. Distinguish between back Cross and test Cross.
6. Define Mutation.
7. Define Genotype and Phenotype.
8. What are antigens and antibodies?
9. What is qualitative genetics?
10. What are the biometric principles that are applied in genetics?
11. Distinguish between sex-linked and sex-influenced characters.
12. What is continuous trait?

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

Answer any **FIVE** questions

13. Give an account of types of chromosomes and genes.
14. Explain about interactions of genes.
15. Explain the sex linked inheritance of Haemophilia in human beings.
16. Distinguish between the prokaryotic and Eukaryotic cells.
17. What are the characteristics of Quantitative Inheritance?
18. Write down the applications of Chi-square test.
19. What are the reasons behind sickle cell anemia?

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

Answer any **THREE** questions

20. Explain RH blood group in detail.
21. Explain Law of Segregation and Low of Independent assortment.
22. State and Explain Hardy-Weinberg Equilibrium.
23. Explain the steps involved in Genetic algorithm.
24. Explain the various types of gene action in detail.

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