QP CODE: 25025089

25025089

Reg No : .....

Name : .....

M.Sc DEGREE (CSS) EXAMINATION, MAY 2025

Second Semester

M Sc ZOOLOGY

CORE - ZL010203 - GENETICS AND BIOINFORMATICS

2019 ADMISSION ONWARDS

5164D117

Time: 3 Hours

Weightage: 30

Part A (Short Answer Questions)

*Answer any **eight** questions.*

*Weight **1** each.*

1. What do you mean by phenotypic plasticity? Give an example.
2. Comment on Mitochondrial genome.
3. What is solenoid model of DNA packaging in eukaryotes?
4. What is Werner syndrome?
5. Name two repeated DNAs that lack coding functions.
6. What do you meant by Conditional and Lethal mutations?
7. What is Photoreactivation DNA repair?
8. Comment on X chromosome inactivation.
9. What is consanguinity?
10. Comment on the uses of the Gene network.

(8×1=8 weightage)

Part B (Short Essay/Problems)

*Answer any **six** questions.*

*Weight **2** each.*

11. Comment on various theories on chromosomal crossing over and recombination.
12. Explain the procedure involved in mapping bacteriophage genes.
13. Give an account on transposable elemets in human.
14. Elaborate on molecular mechanisms of mutation.

15. Explain the importance of Narrow-Sense Heritabilityin artificial selection.

16. Write an account on histone code hypothesis.

17. Comment on Protein Structure databases.

18. Explain Protein modeling techniques.

(6×2=12 weightage)

Part C (Essay Type Questions)

*Answer any **two** questions.*

*Weight **5** each.*

19. Write an account on various Mendelian postulates, its experimental derivations and its cytological explanations.

20. Write an essay on molecular mechanisms of DNA replication in eukaryots.

21. Write an account on the role of mitochondrial gene in aging and human diseases.

22. Write an essay on Sequence alignments.

(2×5=10 weightage)