

(Pages : 3)

T – 6408

Reg. No. :

Name :

Second Semester M.Sc. Degree Examination, September 2024

Zoology

ZO 522 : GENETICS, BIostatISTICS AND RESEARCH METHODOLOGY

(2023 Admission)

Time : 3 Hours

Max. Marks : 75

SECTION – A

Answer **any ten** of the following each in a paragraph. Each question carries **2** marks.

1. Define hybrid vigour. Name the genetic factors related with formation of hybrid vigour?
2. Explain Lyon hypothesis.
3. Define and explain the characters of Retrovirus.
4. Comment on the significance and uses of Impact factor.
5. Write the applications of Lambda phages.
6. Mann-Whitney U test.
7. Enlist the steps of DNA fingerprinting.
8. Genetics of ABO system.
9. List out the characteristics of good research.

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10. What are the types of ANOVA?
11. State the influencing factors of expressivity.
12. Comment on different, types of gene therapy.
13. Probability sampling.
14. Skewness.
15. Write the major implications of Polymorphism.

(10 × 2 = 20 Marks)

SECTION – B

Answer **any six** of the following each not exceeding page. Each question carries **4** marks.

16. Types of research.
17. Hardy-Weinberg equilibrium.
18. Microbes in genetic engineering.
19. Legal and ethical issues in genetics.
20. Types of Gene mapping.
21. Major contents in research report writing.
22. Factors disrupting gene equilibrium.
23. Write the major objectives of Human Genome Project.
24. Explain the role of genetics in fisheries.
25. Types of errors in hypothesis testing.

(6 × 4 = 24 Marks)



SECTION – C

Write short essays not exceeding **2** pages on **any three** of the following. Each question carries **7** marks.

26. Write the purpose and procedure of karyotype analysis.
27. Describe the regulatory and accessory genes of HIV.
28. Different types of research designs.
29. Important theoretical distributions.
30. Mosaicism and its types.

(3 × 7 = 21 Marks)

SECTION – D

Answer **any one** of the following, not exceeding **4** pages. The question carries **10** marks.

31. Chromosome banding.
32. Explain the cause, symptoms, diagnosis and management of various genetic disorders.

(1 × 10 = 10 Marks)

