Reg. No ..... Name **26P224**

M. Sc. DEGREE END SEMESTER EXAMINATION - APRIL 2026

SEMESTER 2 : ZOOLOGY

COURSE : **24P2ZOOT06 : GENETICS AND BIOINFORMATICS**

(For Regular 2025 Admission and Improvement/Supplementary 2024 Admission)

Time : Three Hours Max. Weights: 30

PART A

Answer any 8 questions **Weight: 1**

1.	What is loss of function mutation?	(U)
2.	Comment on Micro RNA.	(A)
3.	Explain the contents of PRINTS Database.	(U)
4.	What is a Phenocopy?	(U)
5.	Explain UPGMA method?	(R)
6.	What is Pedigree analysis?	(U)
7.	What is a Gene Chip?	(R)
8.	Differentiate between a phylogram and a cladogram.	(An)
9.	What is histone code hypothesis?	(U)
10.	What is cot curve?	(A)

(1 x 8 = 8)

PART B

Answer any 6 questions **Weights: 2**

11.	What is Tetrad analysis of Neurospora?	(U)
12.	Brief on interrupted genes in eukaryotes.	(U)
13.	Explain a gap in a sequence alignment. Explain its implications in phylogenetic information.	(U)
14.	Explain Lod score for linkage testing.	(A)
15.	Explain the procedure of Phylogeny inference from molecular sequence data.	(U)
16.	Brief on mini and micro satellites.	(U)
17.	What is meant by 'data exchange' between databases? Explain with an example of data exchange system.	(U)
18.	What are the uses of DNA Microarrays?	(U)

(2 x 6 = 12)

PART C

Answer any 2 questions **Weights: 5**

19.	Explain the methodology of deciphering evolutionary relationships from molecular sequence data.	(U)
20.	Elaborate on chromatin modifications and their mechanism of action.	(U)
21.	Explain semi conservative replication of DNA.	(U)
22.	Elaborate on protein databases and their importance in biomedical research.	(E)

(5 x 2 = 10)

OBE: Questions to Course Outcome Mapping

CO	Course Outcome Description	CL	Questions	Total Wt.

Cognitive Level (CL): Cr - CREATE; E - EVALUATE; An - ANALYZE; A - APPLY; U - UNDERSTAND; R - REMEMBER;