

Total No. of Printed Pages: 01

SUBJECT CODE NO: -FNP-6197
FACULTY OF SCIENCE AND TECHNOLOGY
MSC. F.Y.(SEM-II) (NEP Pattern-2023-2024) Zoology
Examination November / December 2025
Genetics and Bioinformatics-SAC165502T

[Time: 1.30 Hours]

[Max. Marks: 45]

Please check whether you have got the right question paper.

N. B

1) Draw well labelled diagrams wherever necessary.

Q1 Attempt the following multiple-choice question.**10**

- The centromere is essential for
 - DNA replication.
 - protein synthesis.
 - Chromosome movement during cell division
 - RNA splicing.
- Who first analyzed the fine structure of genes using bacteriophage T4?
 - Watson and Crick
 - Beadle and Tatum
 - Seymour Benzer
 - Barbara Mc Clintock.
- The smallest unit of genetic recombination. is called a ____
 - Codon
 - Recon.
 - Cistron
 - Muton.
- Which is the primary aim of bioinformatics in Zoological research?
 - To Create vaccines
 - To study astronomical objects.
 - To store retrieve and analyze biological data
 - To monitor plant growth.
- Which tool is commonly used for Comparing nucleotide or protein sequences?
 - BLAST
 - Excel.
 - PYMOL
 - RASMOL.

Q2 Short answer questions: (solve any Three)**15**

- Structure and function of gene.
- Mutation, types and effects.
- scope of bioinformatics,
- PDB database,
- Construction of phylogenetic trees,

**Q3 Long answer questions. (solve any Two)****20**

- Describe the role of mutation in genetic diversity and evolution among the animal species
- Describe the structure and function of major biological database used in bioinformatics.
- Describe the polygene and Lamp brush Chromosome