III Semester B.Sc. Examination, April/May 2023
(NEP Scheme)
GENETICS
Biomolecules and Molecular Genetics

Time : 2½ Hours

Max. Marks : 60

Instruction : *Draw diagrams* **wherever** *necessary.*

PART – A

I. Answer **any four** of the following :

(4×2=8)

1) Write the properties of Enzymes.

2) State Chargaff's rule.

3) What is meant by methylation ?

4) What are Transposons ?

5) Define Genetic code.

6) What is Gene Silencing ?

PART – B

II. Answer **any four** of the following :

(4×5=20)

7) Explain the structure of carbohydrates.

8) Describe Harshey and Chase experiment.

9) Explain Theta model of DNA Replication.

10) Explain the structure of tRNA with a neat labelled diagram.

11) Describe Lac-Operon concept.

12) Write note on P elements in Drosophila.

PART – C

III. Answer **any four** of the following :   (4×8=32)

13) Give the structure and classification of Carbohydrates.

14) Explain DNA Replication in Prokaryotes.

15) Describe the structure and functions of different forms of DNA.

16) Explain Transcription in prokaryotes.

17) Describe galactose metabolism in Yeast.

18) Write short notes on :

   a) Transition and transversion.

   b) SOS Repair.