61429

IV Semester B.Sc. Examination, September/October 2022
(CBCS Scheme)
GENETICS
GNT 401 : Molecular Genetics

Time : 3 Hours Max. Marks : 70

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

PART – A

Answer **any five** of the following : **(5×3=15)**

1. Define proteomics. Give its applications.
2. Write short notes on Sexduction.
3. List the significance of Mutations in Evolution.
4. What are physical mutagens ? Give two examples.
5. What are Ribozymes ? Give examples.
6. Mention the steps involved in Replication.
7. Differentiate between Recon and Muton.

PART – B

Answer **any five** of the following : **(5×5=25)**

8. Explain 'F' factor mediated conjugation.
9. Write short notes on Inducible Operon.
10. Give a brief note on photo reactivation.
11. What are lethal mutations ? Give examples.
12. Describe the structure of mRNA.
13. Illustrate Meselson and Stahl experiment.
14. Give a brief account on the organization of mitochondrial genome.

P.T.O.

PART – C

Answer **any three** of the following : **(3×10=30)**

15. Describe the structure and mechanism of tryptophan operon.

16. Explain Avery MacLeod and Mc Carty experiment to prove DNA as genetic material.

17. Give a detailed account on translation and add a note on post translational modifications.

18. What are transposable element ? Explain transposable elements in Drosophila.

19. Write short notes on :
    a) Alkylating agents
    b) Nonsense mutations.
