

61517

Fifth Semester B.Sc. Degree Examination, March/April 2021

(CBCS Scheme)

Genetics

Paper V GNT 501 — RECOMBINANT DNA TECHNOLOGY

Time : 3 Hours]

[Max. Marks : 70

Instructions to Candidates : Draw neat labelled diagram wherever necessary.

PART – A

- I. Answer any **FIVE** of the following : (5 × 3 = 15)
1. What are Klenow fragments?
 2. List any three properties of an ideal vector.
 3. What are Bacteriophages? Give two examples.
 4. Define Electroporation.
 5. What are Scorable markers? Give two examples.
 6. What is the role of Taq Polymerase?
 7. Define nif genes.



PART – B

- II. Answer any **FIVE** of the following : (5 × 5 = 25)
8. List the uses of RNA dependent DNA polymerase and Exonucleases III in RDT.
 9. Explain YAC vector.
 10. What are Ti plasmids? Explain.
 11. Describe 'micro injection'. Add a note on its advantages and disadvantages.
 12. Explain Insertional Inactivation.
 13. Write a note on Autoradiography and its applications.
 14. Write an account on Transgenic knockout mice and its applications.

61517

PART - C

- III. Answer any **THREE** of the following : (3 × 10 = 30)
15. Describe Type I, II and III restriction enzymes.
 16. Write an account on Plasmid vectors.
 17. Explain Sanger's di deoxy method with labelled diagram.
 18. Explain :
 - (a) Colony hybridization.
 - (b) Visual screening method.
 19. Describe the steps involved in PCR and its applications.

