Exam. Code : 107405
Subject Code : 1742

B.Sc. Biotechnology 5th Semester

rDNA TECHNOLOGY-A

Paper : BT-1

Time Allowed—3 Hours] [Maximum Marks—40

Note :– Attempt **FIVE** questions in all, selecting at least **ONE** question from each section. The **fifth** question may be attempted from any section. All questions carry equal marks.

SECTION–A

1. What is rDNA technology ? Write a precise note on enzymes used in recombinant DNA technology.
2. Define Alkaline phosphatase and Polynucleotide kinase. Discuss their applications in details.

SECTION–B

3. What are the features of a cloning vector ? Discuss the plasmid based cloning vectors.
4. Why genetic selection is done ? Discuss the role of Hfl and Spi markers in genetic selection.

SECTION–C

5. What is Northern blotting ? Explain the various steps involved in it.

6. What is transformation ? Discuss the advantage of micro-projectile method over other methods for gene transfer in plants.

SECTION–D

7. Why RNA probes are labelled ? Discuss the detection system of labeled RNA probes.
8. How nick translation is different from random priming method of radioactive labelling ? Explain it with respect to its applications.