3rd semester M.Sc Degree examination, December 2008
Biotechnology
BTP-304 :Genetic Engineering

Time: 3hours Max.Marks:80

SECTION A (5*3)

Write brief notes on any five of the following

1. DNA ligase.

2. Relaxed plasmid .

3. Transposon.

4. Shuttle vector .

5. Competent cells.

6. Autoradiography.

7. Ti-plasmid.

SECTION B (4*5)

Answer any four of the following

8. Describe the features and the use of phagemid vector.

9. Briefly explain the types and cleavage pattern of restriction endonuclease.

10. Outline the steps involved in random primer labelling of DNA.

11. Write a note on the principle and application of PAGE.

12. What is alpha complementation? Explain it;s role in the selection of recombinant clones.

13. Write the procedure involved in purification of genomic DNA.

SECTION C (3*15)

Answer any three of the following

14. Explain in detail the construction of cDNA library.

15. Describe principle, protocol and applications of southern blotting technique.

16. Out line the steps involved in sequencing of DNA by enzymatic method.

17. Describe the salient feature of Lambda phage expression vector and add a note on the process of invitro packaging of recombinant DNA.

18. Explain the different abiotic transformation techniques used in recombinant DNA work.