[EPRBT 121]
M.Tech. DEGREE EXAMINATION

BIOTECHNOLOGY
I SEMESTER

MOLECULAR BIOLOGY AND GENETIC ENGINEERING
(Effective from the admitted batch 2008–09)

Time: 3 Hours
Max.Marks: 60

Instructions: Each Unit carries 12 marks.
Answer all units choosing one question from each unit.
All parts of the unit must be answered in one place only.
Figures in the right hand margin indicate marks allotted.

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UNIT-I

1. Differentiate between cloning vectors and expression vectors giving suitable examples. Mention the major applications. 12

OR

2. Write brief account on : a) SINEs  b) YEP  c) Group II Introns. 12

UNIT-II

3. Write an account on posttranscriptional modifications and explain their significance. 12

OR

4. Describe the functional significance of a) SnRNPs  b) RNAi. 12

UNIT-III

5. Explain the Signal transduction mechanisms in mycobacteria. 12

OR

6. Enumerate the steps in cell cycle and describe the regulatory mechanisms at each phase of cell cycle. 12

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UNIT-IV

7. Evaluate the principles involved in protein sequencing by Edman degradation and Mass spectrometry. 12

OR

8. Sketch the various steps in Oligonucleotide synthesis. 12

UNIT-V

9. Highlight the principle and experimental methods in microarray technique. 12

OR

10. Describe in detail the various steps involved in the construction of a genomic library 12

[01/IS/208]