M.Sc. (Microbiology) Third Semester Old

MB3-T010 - Recombinant DNA Technology (RDT) Paper-II

P. Pages : 1 **GUG/W/18/2297**

Time : Three Hours * 1 7 9 1 * Max. Marks : 80

Notes : 1. All questions are compulsory and carry equal marks.

1. Explain in detail activity and mode of action of enzyme reverse transcriptase. **16**

OR

a) Describe classification of type II endonucleases. **8**

b) Write properties and specificity of DNA ligase. **8**

2. What is genomic library? Explain concept of library construction and give ideal examples of genomic library. **16**

OR

a) Explain the structure of lambda gt 10 vector and its use as a vector. **8**

b) Explain the features of PE vector used for gene expression. **8**

3. Discuss in detail rDNA technology for interferon production with flow sheet diagram. **16**

OR

a) Explain the role of promoter probe vectors in rDNA technology. **8**

b) Add a note on genetically modified microorganisms. **8**

4. Explain the principle, procedure and applications of immune PCR. **16**

OR

a) Discuss genome sequencing in detail. **8**

b) Explain the physical mapping of genome. **8**

5. Write short notes on –

a) Write various enzymes used in rDNA technology. **4**

b) Cosmids as a vector for gene cloning. **4**

c) Expression vectors. **4**

d) Variations in basic PCR. **4**

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