M.Sc.(Microbiology) (CBCS Pattern) Semester - III

PSMBT-10 - Paper-II : Recombinant DNA Technology

P. Pages : 1 **GUG/S/23/11292**

Time : Three Hours * 1 4 6 1 * Max. Marks : 80

Notes : 1. All questions are compulsory and carry equal marks.
2. Draw diagrams wherever necessary.

1. Write in detail about different enzymes used in recombinant DNA technology. **16**

OR

a) Write in detail the activity and mode of actions of reverse transcriptase enzyme. **8**

b) Write a note on chemical synthesis of DNA. **8**

2. Explain in detail different artificial chromosomes. **16**

OR

a) Write short note on pET vector and pBAD vector. **8**

b) Write in short about cDNA library. **8**

3. Discuss different applications of GEMS. **16**

OR

a) Write short note on expression vector. **8**

b) Write short note on promoter probe vector. **8**

4. Explain in detail of optimization of PCR and also discuss different variation in basic PCR. **16**

OR

a) Write a note on dideoxy method of DNA sequencing. **8**

b) Write short note on automated DNA sequencer. **8**

5. Write short note on:

a) BAL31 nuclease. **4**

b) Cosmid and plasmid. **4**

c) Insulin production by RDT. **4**

d) Applications of PCR. **4**

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