

M.Sc. (Microbiology) (CBCS Pattern) Semester-III
PSMBT-10 - Paper-II : Recombinant DNA Technology

P. Pages : 1

Time : Three Hours



GUG/S/25/11292

Max. Marks : 80

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

1. Describe in detail classification of type I, type II and type III endonucleases. **16**

OR

- i) Discuss in detail properties and specificity of DNA ligase. **8**
ii) Describe in detail reverse transcriptase. **8**

2. Describe in detail plasmids and other advanced vectors. **16**

OR

- i) Describe in detail cloning-vectors lambda gt10. **8**
ii) Discuss in detail construction with of genomic libraries. **8**

3. Describe in details cloning and production of interferon. **16**

OR

- i) Give the account of genetically modified organism. **8**
ii) Discuss vectors for library construction of artificial chromosome. **8**

4. Describe in detail DNA sequencing by method-dideoxy and chemical method. **16**

OR

- i) Discuss in detail real time quantitative PCR. **8**
ii) Discuss designing of primers and identification of PCR products. **8**

5. Write in short - all compulsory.

- i) Discuss in detail DNA polymerase. **4**
ii) Discuss in detail expression of YAC vector. **4**
iii) Describe genetically engineered microorganisms. **4**
iv) Discuss applications of PCR. **4**
