

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

P. Pages : 1

Time : Three Hours



GUG/W/24/11292

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 restriction endonuclease and their types I, II and III. **16**

OR

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

2. Describe in detail concept of library construction with cDNA and genomic libraries. **16**

OR

- i) Describe in detail cloning-vectors lambda gt10. **8**
ii) Discuss in detail plasmid as a vector for gene. **8**

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

OR

- i) Give the account of genetically modified organism. **8**
ii) Discuss in detail promoter probe vector. **8**

4. Describe in detail designing of primers and identification of PCR products. **16**

OR

- i) Discuss in detail real time quantitative PCR. **8**
ii) Give the account of chemical method of DNA sequencing. **8**

5. Write in short-**all** compulsory. **4**

- i) Discuss in detail DNA polymerase. **4**
ii) Discuss in detail expression of pET vector. **4**
iii) Describe production of interferon. **4**
iv) Discuss genome sequencing. **4**
