

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

P. Pages : 1

Time : Three Hours



GUG/W/22/11292

Max. Marks : 80

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

1. Explain in details Restriction Endonucleases and their types? **16**

OR

Explain its activity and mode of action of DNA polymerase?

2. Explain the Basic strategy of cloning-vectors and their types in details? **16**

OR

Explain the concept of gene library and describe construction cDNA and genomic libraries?

3. Describe in details recombinant DNA technology with reference to cloning and production of insulin? **16**

OR

Explain :

- a) Genetically modified organisms? **8**
b) Construction of artificial chromosome? **8**

4. Explain principle, procedure and optimization of PCR in details? **16**

OR

Discuss in details DNA sequencing method of dideoxy and chemical method?

5. Write a note on :
- a) Reverse transcriptase? **4**
b) M13 vectors? **4**
c) Expression vectors? **4**
d) Real-time quantitative PCR? **4**
