

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

P. Pages : 1

Time : Three Hours



GUG/W/23/11292

Max. Marks : 80

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

1. Discuss in detail the function of restriction endonucleases, DNA ligase and DNA polymerases. **16**

OR

Write notes on.

- a) Chemical synthesis of DNA. **8**
b) Reverse transcriptase and its activity. **8**
2. Describe in detail cDNA and genomic library and applications. **16**

OR

- a) Discuss plasmids as vectors. **8**
b) Explain DNA cloning with single stranded DNA vectors. **8**
3. Explain in detail the r DNA technology with reference to insulin production. **16**

OR

- a) Discuss artificial chromosomes as vectors for gene library construction. **8**
b) Add a note on genetically modified organisms. **8**
4. Explain in detail principle, procedure and optimization of PCR. **16**

OR

Write notes on.

- a) Dideoxy method for DNA sequencing. **8**
b) Physical mapping of genomes. **8**
5. Write short notes on. **16**
a) Transformation.
b) Lambda replacement vectors.
c) Promoter probe vectors.
d) Primers.
