

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai — 600 044.

M.Sc.(PBPBT) - END SEMESTER EXAMINATIONS APRIL - 2023

SEMESTER - II

20PPBET2003 - Molecular Biology and Genetic Engineering

Total Duration : 2 Hrs. 30 Mins.

Total Marks : 60

Section B

Answer any **SIX** questions ($6 \times 5 = 30$ Marks)

1. Write short notes: (a) Topoisomerase (b) DNA methylation.
2. Illustrate and explain the nucleotides of RNA molecule.
3. Elaborate on the mechanism of transcription in prokaryotes.
4. Write detailed notes on PBR 322 vector and its derivative.
5. Tabulate the comparison of types of restriction enzymes.
6. Brief notes on the gene markers used in plant transformation.
7. Discuss the principles and applications of PCR.
8. Explain antisense RNA technology and its application.

Section C

I - Answer any **TWO** questions ($2 \times 10 = 20$ Marks)

9. Summarize the types of DNA and its nucleotides.
10. Explain DNA replication mechanism in eukaryotes.
11. Elaborate on construction of chimeric DNA.
12. Discuss the procedure in constructing artificial chromosome vector.

Part B

II - Compulsory question ($1 \times 10 = 10$ Marks)

13. Analyze the types of blotting techniques used for various clones.

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