

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2018
(Second Semester)

Branch-BIOTECHNOLOGY

RECOMBINANT DNA TECHNOLOGY

Time: Three Hours

Maximum: 75 Marks

Answer ALL questions

ALL questions carry EQUAL marks

(2 + 5+ 8)

- 1 a What is meant by Palindrome sequences?
b Write a short note on type II restrictions enzymes,
c Explain in detail on restriction mapping with an example.
OR
d What is the role of DNA Methylase?
e Write in short on properties of DNA Ligase.
f Discuss in detail about DNA Polymerases.
- 2 a What is Plasmid?
b Give a short account on phage vector,
c What is cloning? Explain about cloning in *Streptomyces*.
OR
d What is Phasmid?
e Give a short account on Broad host range vectors,
f Explain in detail on Yeast vectors.
- 3 a What is meant by genomic DNA library?
b Write a note on selectable markers in animal vectors,
c Give a detailed note on gene transfer to animal cells using physical methods.
OR
d What is probe? * .
e Comment on Gene targeting technology.
f Elaborate in detail on construction and screening of cDNA library.
- 4 a What is Blotting?
b Give a short account on DNA Profiling.
c Write a detailed notes on principle and applications of RT PCR.
OR
d What is PCR?
e Comment on Primer designing.
f What is DNA sequencing? Explain in detail about its methods.
- 5 a What is Bioreactor?
b Write a note on DNA Vaccine.
c Discuss in detail about Metabolic engineering for the production of useful products.
OR
d What is DNA augmentation therany?