

Reg. No.

--	--	--	--	--	--	--	--	--	--



**BTH 452**

**II Semester M.Sc. Degree Examination, September/October 2022**  
**BIOTECHNOLOGY**  
**Genetic Engineering**

Time : 3 Hours

Max. Marks : 70

**PART – A**

1. Write short notes on **any ten** of the following (**not exceeding 1 page each**). **(10×2=20)**
- Isoschizomers.
  - Topoisomerase.
  - Terminal nucleotidyl transferase.
  - Cosmids.
  - RFLP.
  - Gene probes.
  - Single nucleotide polymorphism.
  - DNA footprinting.
  - Plaque phenotype.
  - Dot blot.
  - Colony hybridization.
  - Shuttle vectors.

**PART – B**

Write explanatory notes on **any five** of the following (**not exceeding 3 pages**). **(5×6=30)**

- Construction of genomic libraries.
- Viral vectors.
- Artificial chromosome vectors.
- Chromosome walking and chromosome jumping.
- DNA fingerprinting.
- In-vitro* mutagenesis.
- Two-dimensional electrophoresis.

**P.T.O.**



PART – C

Write long answers on **any two** of the following (**not** exceeding 7 pages). **(2×10=20)**

9. Give an account of polymerase chain reaction: design, optimization, types and applications.
  10. Discuss the techniques for introducing genes in prokaryotes and eukaryotes.
  11. Write an explanatory note on : DNA sequencing techniques.
  12. Discuss the various methods for gene expression analysis.
-