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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.
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