Reg. No. | | | | | | | | | |

BTH 451

II Semester M.Sc. Degree Examination, September/October 2022
BIOTECHNOLOGY
Molecular Biology

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)**

   a) Okazaki fragments

   b) Sigma factors

   c) Protein splicing

   d) Stop codons

   e) Maternal genes

   f) p53 gene

   g) Tight junction

   h) Autocrine cell signaling

   i) Acetylcholine

   j) Benzopyrene

   k) Monospermy

   l) cGMP.

PART – B

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

2. Nuclear export of mRNA.

3. Catabolic repression.

P.T.O.

4. Gene action during oogenesis.
5. cAMP-mediated signal transduction.
6. Radiations-induced cancers.
7. Central Dogma of molecular biology and its modifications.
8. Organization of prokaryotic genomes.

PART – C

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

9. Explain with diagram gene transcription in eukaryotes.
10. Discuss post-translational modifications and the involvement of different translational factors at different stages of the process.
11. Give a detailed account of the genetic basis of cancer.
12. Describe nuclear-cytoplasmic interactions during embryonic development.

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