18BT42

(10 Marks)

## Fourth Semester B.E. Degree Examination, Jan./Feb. 2023 Molecular Biology

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

		Module-1	*
1	a.	Explain the structure and forms of DNA with neat diagram.	(10 Marks)
	b.	Discuss the difference between central Dogma and dogma of molecular biology.	(10 Marks)
		OR	
2	a.	Explain the mechanism of DNA replication in eukaryotes.	(10 Marks)
	b.	Write a note on reversible denaturation and hyperchromic effect of DNA.	(10 Marks)
		Control of the contro	
		Module-2	
3	a.	Explain the structure and function of RNA polymerases in prokaryotes.	(10 Marks)
	b.	Write short note on post transcriptional processing of mRNA.	(10 Marks)
		OR	
4	a.	Explain the steps of transcription in proparyotes.	(12 Marks)
	b.	Write short note on transcription inhibitors.	(08 Marks)
_		Module-3	(10 Marks)
5	a.	Explain the mechanism of translation in eukaryotes.	(10 Marks)
	b.	Describe the enzyme involved in translation in prokaryotes.	(10 Marks)
		OR	
6	0	Highlight the difference between prokaryotic and eukaryotic protein synthesis.	(10 Marks)
6	a. b.	Write short note on inhibitors of translation.	(10 Marks)
	υ.	Write Short hote on minorous of translation.	(2000)
		Module-4	
7	a.	Explain lac operation in detail.	(10 Marks)
,		Explain various levels of gene expression.	(10 Marks)
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		OR	
8	a.	Give a complete note on homeobox and hox genes.	(10 Marks)
	b.	Explain the negative regulation of trp Operon.	(10 Marks)
		Module-5	
9	a.	Explain the three mechanism of recombination in prokaryotes in detail.	(10 Marks)
	b.	Write short note on retroviruses.	(10 Marks)
		OR	(10 Mayl)
10	a.	What are transposions explain their importance?	(10 Marks)

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Explain the major five basic mechanism of DNA repair.

2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice. Important Note: 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.