Model Question Paper-1 with effect from 2019-20 (CBCS Scheme)

USN | | | | | | | | | | |

Fourth Semester B.E. Degree Examination

Molecular Biology

TIME: 03 Hours **Max. Marks: 100**

Note: 01. Answer any **FIVE** full questions, choosing at least **ONE** question from each **MODULE**.

		Module -1	*Bloom's Taxonomy Level	Marks
Q.01	a	Illustrate detailed structure of DNA with suitable diagram.	L 2	10
	b	Explain chromosomal theory of inheritance with suitable example.	L 2	10
		OR		
Q.02	a	What are the important enzymatic activities of DNA polymerase	L 1	10
	b	Explain DNA supercoiling and proteomics of DNA replication	L 2	10
		Module-2		
Q. 03	a	With the help of Diagrams explain the process of transcription in eukaryotes	L 2	12
	b	Identify the beneficial effects of capping and tailing of RNA	L 3	08
		OR		
Q.04	a	Explain different classes of RNA by mentioning two important functions.	L 2	12
	b	Summarize transcription factors and inhibitors.	L 2	08
		Module-3		
Q. 05	a	Explain the process of Translation in prokaryotes. State any four differences from eukaryotic translation.	L 2	10
	b	Describe types of post translational modifications	L 1	10
		OR		
Q. 06	a	Explain mechanisms of translation in eukaryotes.	L 2	10
	b	Write short notes on start and stop codons	L 2	10
		Module-4		
Q. 07	a	Briefly describe the process of regulation of gene expression in Lac Operon.	L 2	10
	b	Comment on various characteristic motifs in DNA binding Proteins	L 2	10
		OR		
Q. 08	a	Explain gene expression in Prokaryotes.	L 2	10
	b	Define gene regulation. Write a notes on types of Gene regulations.	L1, L2	10
		Module-5		
Q. 09	a	Elucidate different types of Transposons.	L 2	10
	b	Elaborate genetic recombination in bacteria.	L 2	12
		OR		
Q. 10	a	Discuses types of DNA damage and mechanism of repair.	L 2	10
	b	Explain Gene mapping techniques	L 2	10

*Bloom's Taxonomy Level: Indicate as L1, L2, L3, L4, etc. It is also desirable to indicate the COs and POs to be attained by every bit of questions.