SHRI MATA VAISHNO DEVI UNIVERSITY, KATRA

School of Biotechnology

B.Tech. (Civil/Electrical/Electronics) Major Examination (Odd Semester) 2024-25

Entry No: | | | | | | | | | |

Date: 26.12.2024

Total Number of Pages: [1]

Total Number of Questions: [2]

Course Title: BIOLOGY FOR ENGINEERS

Course Code: BTLBS102

Time Allowed: 3 Hours

Max Marks: [40]

Section – A (Attempt any five)

Q1.	(a) Give two points of difference between eukaryotic and prokaryotic genes.	[02]	CO4
	(b) What is replication fork?	[02]	CO4
	(c) What is the role of rRNA in translation?	[02]	CO4
	(d) Define biofuels with example.	[02]	CO3
	(e) How do prokaryotic and eukaryotic ribosomes differ from each other?	[02]	CO1
	(f) What is the role of nucleus in a cell?	[02]	CO1
	(g) How do RNA and DNA differ from each other?	[02]	CO2

Section – B (Attempt Any five Questions)

Q2.	(a) Write a note on different levels of protein structure.	[06]	CO2
	(b) Explain the different applications of enzyme.	[06]	CO3
	(c) Write a detailed note on vaccines.	[06]	CO3
	(d) What are biosensors? What are their applications?	[06]	CO3
	(e) Write a note on translation.	[06]	CO4
	(f) Using diagrams explain the difference between plant and animal cells.	[06]	CO1
	(g) Write a note on cell cycle.	[06]	CO1
	(h) Write a detailed note on DNA replication.	[06]	CO4

CO1 Define the cells, its structure and function, and Different types of cells and basis for, Classification of living organisms.
CO2 Understand biomolecules and their structure, function and their role in a living organism and how biomolecules are useful in Industry.
CO3 Demonstrate the concept of biology and its uses in combination with different technologies for the production of medicines and production of transgenic plants and animals.
CO4 Illustrate about genes and genetic materials (DNA& RNA) present in living organisms and how they replicate, transfer & preserve vital information in living organisms.

CO	Questions Mapping	Total Marks	Total Number of Students (to be appeared in Exam)
CO1	1 (e), 2 (f), 2 (g)	14	123
CO2	1 (f), 2 (a),	8	123
CO3	1 (d), 2 (b), 2 (c), 2 (d)	20	123
CO4	1 (a), 1(b), 1 (c), 2 (e), 2 (h)	18	123