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Daffodil International University

Department of Genetic Engineering and Biotechnology
Faculty of Health and Life Sciences
B. Sc. (Hons.) in Genetic Engineering and Biotechnology
Final Examination Summer 2025

Course Code: 0512-1207
Level and Term: L1, T2
Time: 2 hours

Section: A, B

Course Title: Microbi
Course Teacher Initi
Total Marks: 40

Splitting any answer is strictly prohibited

1	(a)	Name some common bacteriophages and diagrammatically show a bacteriophage highlighting its major parts.	[CLO5, PLO1, C1]
	(b)	Mention some experimental evidences of specialized transduction.	[CLO3, PLO1, C2]
2	(a)	Evaluate the life cycle of T4 phage and state the major differences between lytic and lysogenic cycle.	[CLO7, PLO1, C5]
	(b)	Illustrate the key steps of T4 bacteriophage recombination system.	[CLO7, PLO1, C3]
3	(a)	What are transposable elements (TEs)? Analyze the mechanism of transposition.	[CLO3, PLO1, C1]
	(b)	List some major T4 bacteriophage genes with their key functions.	[CLO7, PLO1, C2]
4	(a)	Discuss restriction endonucleases and provide the biological significance of constructing a gene library.	[CLO3, PLO1, C6]
	(b)	Write short notes on homopolymer tailing and cosmid.	[CLO3, PLO1, C4]
5	(a)	Explain the Gibson assembly method in a flow diagram.	[CLO5, PLO1, C3]
	(b)	Summarize the applications of molecular cloning.	[CLO5, PLO1, C4]

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