



Department of Genetic Engineering and Biotechnology
Faculty of Health and Life Sciences
B. Sc. (Hons.) in Genetic Engineering and Biotechnology
Midterm Examination Spring 2026

Course Code: 0512- 1101

Level and Term: L-1, T-1
Time: 1 Hour 30 Minutes

Section: 261 A

Course Title: Introduction to Genetic Engineering and Biotechnology
Course Teacher Initials: MAR
Total Marks: 25

			Marks
1	(a) Define Biotechnology according to the European Federation of Biotechnology (EFB).	[CLO1, PLO2, C1]	2
	(b) Distinguish between "Traditional Biotechnology" and "Modern Biotechnology"	[CLO1, PLO2, C4]	3
2	(a) Name four sources from which a researcher can get a "Target Gene" for cloning	[CLO2, PLO3, C1]	2.5
	(b) Describe two essential parts of a DNA vector	[CLO2, PLO4, C1]	2.5
3	(a) Explain the roles of restriction enzymes and DNA ligase in the "Cut and Paste" steps of cloning.	[CLO2, PLO4, C5]	2.5
	(b) Outline the steps transformation and selection in the cloning workflow.	[CLO2, PLO4, C2]	2.5
4	(a) Describe how biotechnology is used to produce human peptide hormone Somatostatin.	[CLO3, PLO1, C2]	2.5
	(b) Identify any three medical products that can be produced using biotechnological methods.	[CLO3, PLO1, C3]	2.5
5	(a) Compare between conjugation and lipofection.	[CLO2, PLO10, C4]	2
	(b) Design a simple experiment to prove that a bacterial cell has successfully taken up a recombinant plasmid using an antibiotic resistance marker.	[CLO2, PLO10, C6]	3