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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
Midterm Examination Summer 2026

Course Code: 0512-1101 | **Course Title: Introduction to Genetic Engineering**
Level and Term: L1, T1 | **Section: 262 A** | **Course Teacher Initials: DNH**
Time: 1 Hour 30 minutes | **Total Marks: 40**

No.		Questions		Marks
1.	(a)	Define biotechnology. Explain why biotechnology is considered a multidisciplinary subject.	[CLO1, PLO2, C1]	3
	(b)	What is genetic engineering? State the core techniques used in genetic engineering.	[CLO1, PLO2, C3]	2
2.	(a)	Write a brief historical context of modern biotechnology.	[CLO1, PLO1, C5]	2
	(b)	State the application of biotechnology in the field of environmental science and industrial production.	[CLO2, PLO1, C4]	3
3.	(a)	What is the biotechnology commercialization? Briefly describe the key steps of biotechnology commercialization.	[CLO2, PLO1, C2]	3
	(b)	State the challenges and ethical considerations of genetic engineering.	[CLO1, PLO2, C1]	2
4.	(a)	Define recombinant DNA technology. Describe the different types of gene modification that can be performed using this technology.	[CLO1, PLO1, C1]	3
	(b)	What are transgenic organisms? List and briefly explain any three different types of transgenic organisms, giving one example for each.	[CLO1, PLO2, C6]	2
5.	(a)	Illustrate the process of producing human proinsulin using recombinant DNA technology.	[CLO2, PLO2, C2]	3
	(b)	List three different types of recombinant interferons that are currently used in medicine with their gene source, host and clinical use.	[CLO2, PLO2, C6]	2

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