



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 Spring 2026

Course Code: 0512-2101
Level and Term: L2, T1
Time: 1 Hour 30 Minutes

Section: 251 (A+B)

Course Title: Molecular Biology
Course Teacher Initials: SBN & AR
Total Marks: 25

			Marks
1	(a) Define nitrogenous base. Illustrate the structure of one purine and one pyrimidine base.	[CLO1, PLO1, C1]	3.0
	(b) Explain Chargaff's rule of base pairing.	[CLO1, PLO1, C2]	2.0
2	(a) Describe the double helix model of DNA with key structural features.	[CLO2, PLO2, C2]	3.0
	(b) Differentiate between nucleoside and nucleotide.	[CLO1, PLO1, C4]	2.0
3	(a) Discuss the roles of enzymes involved in DNA replication.	[CLO1, PLO1, C6]	3.0
	(b) Evaluate the significance of DNA replication in biotechnology applications.	[CLO2, PLO2, C5]	2.0
4	(a) Define transcription and identify its requirements.	[CLO1, PLO1, C1]	2.0
	(b) Explain the process of mRNA splicing.	[CLO2, PLO2, C4]	3.0
5	(a) Describe the complete process of transcription with labeled steps.	[CLO2, PLO2, C3]	5.0