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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 Spring 2026

Course Code: 0512-2101 **Course Title:** Molecular Biology
Level and Term: L2, T1 **Section:** 251 (A+B) **Course Teacher Initials:** SBN &AR
Time: 1 Hour 30 Minutes **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