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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 Fall 2025

Course Code: 0512-1301
Level and Term: L-1, T-3
Time: 2 Hours

Section: 251 (A+B)

Course Title: Basic Biochemistry
Course Teacher Initials: DMI & AR
Total Marks: 40

Splitting any answer is strictly prohibited

			Marks
1	(a)	Explain the concept of amino acids and classify amino acids. [CLO2, PLO2, C2]	3.0
	(b)	Illustrate the structure of three essential amino acids and three basic amino acids. [CLO2, PLO2, C2]	3.0
	(c)	Discuss briefly the physical properties of amino acids. [CLO2, PLO2, C6]	2.0
2	(a)	State the term proteins. Elaborate the structure of proteins. [CLO2, PLO2, C2]	4.0
	(b)	Discuss the N-terminus identification by Edman Degradation method. [CLO2, PLO2, C6]	4.0
3	(a)	Distinguish between the nucleoside and nucleotide. State the physiochemical properties of nucleic acids. [CLO2, PLO2, C4]	4.0
	(b)	Discuss the double helical structure of DNA. [CLO2, PLO2, C6]	4.0
4	(a)	What is RNA? Explain the different types of RNA. [CLO2, PLO2, C1]	3.5
	(b)	Elaborate the functions of RNA. Explain the Denaturation and renaturation of nucleic acids. [CLO2, PLO2, C4]	4.5
5	(a)	Define the term vitamins. Elaborate the Functions and importance of vitamins. [CLO4, PLO2, C6]	4.0
	(b)	Classify hormones based on chemical structure. Explain how hormones work in the human body. [CLO4, PLO2, C2]	4.0

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