



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 Fall 2026

Course Code: 0512-1307
Level and Term: L1, T3
Time: 1 Hour 30 Minutes

Section: 261 (A)

Course Title: Enzymology
Course Teacher Initials: DNH
Total Marks: 25

			Marks
1	(a) Define enzymology. Write the key features of enzymes.	[CLO1, PLO1, C2]	3
	(b) Briefly discuss the oxidoreductases and transferases enzymes with suitable examples	[CLO1, PLO2, C2]	2
2	(a) State the approaches of enzyme nomenclature. Explain Enzyme Commission (EC) number of hexokinase (EC 2.7.1.1).	[CLO1, PLO2, C6]	3
	(b) Write the biological significance of enzyme specificity.	[CLO1, PLO2, C6]	2
3	(a) Explain the induced-fit model of enzyme specificity with a suitable diagram, and discuss its limitations.	[CLO2, PLO1, C4]	3
	(b) Describe the different types of enzyme assays and explain their underlying principles.	[CLO2, PLO2, C5]	2
4	(a) Write the factors affect the enzymatic reaction. How the temperature affects the enzymatic reaction?	[CLO2, PLO1, C1]	3
	(b) "At a certain point of enzymatic reaction, increment of substrate concentration do not increase the reaction rate". Explain the statement.	[CLO2, PLO1, C2]	2
5	(a) Derive the Michaelis-Menten equation and explain the significance of V_{max} and K_m in enzyme kinetics.	[CLO2, PLO1, C5]	4
	(b) Identify the limitations of Lineweaver-Burk equation.	[CLO3, PLO3, C3]	1