



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- 1301
 Level and Term: L-1, T-3
 Duration: 1 Hour 30 Minutes

Section: 252 (A+B)

Course Title: Basic Biochemistry
 Course Teacher Initials: DMI & DEH
 Total Marks: 25

666.142 mol/g

		Marks
1 (a)	Explain the scope of Biochemistry.	[CLO1, PLO1, C2] 2.0
(b)	Discuss the relationship between biochemistry with biology, medicine, and agriculture.	[CLO1, PLO1, C6] 3.0
2 (a)	Draw the linear structure of glucose and ring structure of <u>lactose</u> and <u>sucrose</u> .	[CLO2, PLO2, C3] 3.0
(b)	Discuss the chemical characteristics of carbohydrates.	[CLO2, PLO2, C6] 2.0
3 (a)	Differentiate among starch, glycogen, and cellulose.	[CLO2, PLO2, C4] 3.0
(b)	<u>Classify</u> carbohydrates with suitable examples.	[CLO2, PLO2, C2] 2.0
4 (a)	Elaborate the Henderson-Heschel equation to estimate the pH of a buffer solution.	[CLO2, PLO2, C6] 3.5
(b)	Demonstrate the application of Henderson-Heschel equation.	[CLO2, PLO2, C3] 1.5
5 (a)	Discuss the physical and chemical properties of water.	[CLO2, PLO2, C6] 3.0
(b)	Explain the importance of lipids.	[CLO2, PLO2, C2] 2.0