



Daffodil International University
Department of Agricultural Science
Faculty of Agriculture Sciences
Mid-term Examination, Fall – 2026

Course Code: 0815-1105
Section: 262 All
Full Marks: 25

Course Title: Biochemistry I (General Biochemistry)
Level-Term: L1-T2

Teacher's Initial: MSA
Time: 1 Hour 30 Minutes

"Split answering is strictly prohibited"

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| 1.a) | Define a cell. Briefly explain its classification with the help of proper diagram. | PLO1 CLO1 C1 | 4 |
| b) | If you see a plant cell under a microscope, what will be its picture? Draw it with a labelled diagram. | PLO1 CLO1 C3 | 1 |
| 2.a) | A cell is actively producing and transporting proteins. Based on this situation, describe, with proper diagrams, how the endoplasmic reticulum and Golgi body separately contribute to the cell's activities. | PLO1 CLO1 C3 | 4 |
| b) | Draw and label a diagram of cell wall. | PLO1 CLO1 C3 | 1 |
| 3.a) | Using your knowledge, explain the physical properties of amino acids. | PLO1 CLO2 C3 | 3 |
| b) | Define a peptide bond and draw its structure. | PLO1 CLO2 C1 | 2 |
| 4.a) | Define protein with its classification. | PLO1 CLO3 C2 | 4 |
| b) | Enlist the elemental composition of proteins. | PLO1 CLO3 C2 | 1 |
| 5.a) | Analyze the major factors affecting enzyme activity. For each factor, explain how it affects enzyme activity and draw a suitable graph showing the expected relationship. | PLO1 CLO3 C4 | 3 |
| b) | Briefly analyze how an enzyme-substrate complex is formed. | PLO1 CLO3 C4 | 2 |