



Daffodil International University
 Department of Agricultural Science
 Faculty of Agriculture Sciences
Final Examination, Summer- 2026

Course Code: 0815-1105
 Section: 261 All
 Full Marks: 40

Course Title: Biochemistry I (General Biochemistry)
 Level-Term: L1-T2
 Teacher's Initial: MSA
 Time: 2 Hours

"Split answering is strictly prohibited"

- 1.a) Apply the rules of Fischer projection to draw the structures of α -D-Glucopyranose and β -L-Glucopyranose. PLO1 CLO2 C3 4
- b) Apply the rules of Haworth projection to draw the structures of β -D-Glucopyranose and α -L-Glucopyranose. PLO3 CLO2 C3 4
- 2.a) Describe optical isomers, racemic mixtures, and epimers. PLO1 CLO3 C2 6
- b) Briefly explain about chiral carbon. PLO3 CLO3 C3 2
- 3.a) Evaluate the details of rancidity and saponification value in lipids. PLO2 CLO3 C5 5
- b) Develop two ideas about the industrial applications of lipids with brief explanations. PLO4 CLO3 C6 3
- 4.a) Analyze the sequence of reactions involved in the glycolysis pathway. PLO4 CLO4 C4 5
- b) Define metabolism. Enlist the major pathways of carbohydrate metabolism. PLO4 CLO4 C1 3
- 5.a) Define enzyme. Discuss the major factors affecting enzyme activity and analyze their impact using suitable graphs. PLO4 CLO5 C1 5
C4
- b) Create a graphical model of the lock and key hypothesis and explain enzyme-substrate interaction. PLO5 CLO5 C6 3