ourdiu.com | Shared by ISRAT SARMIN SIFA

Daffodil International University

Department of Nutrition and Food Engineering
Faculty of Health and Life Sciences
B.Sc. in Nutrition and Food Engineering
Midterm Examination Summer 2026

Course Code: 0711-2101 **Course Title:** Food Chemistry
Level and Term: L-2, T-1 **Section:** 252 All **Course Teacher Initials:** JR, MSZ, DMAU
Time: 1 hour 30 minutes **Total Marks:** 25

Maintaining the order of the questions is highly appreciated

				Marks
1	(a)	Define food chemistry with two importance in food safety.	[CLO1,PLO1,C1]	2
	(b)	Suppose you are the quality control officer of Amar Food. As a quality control officer, identify the determinants of quality foods.	[CLO1,PLO1,C3]	3
2	(a)	Discuss the physical properties of water.	[CLO1,PLO1,C1]	2
	(b)	Calculate the water activity of milk powder at 25°C temperature. The partial vapor pressure of water from the milk powder (P) is 15.47 mmHg, and the saturated vapor pressure of pure water (P_o) at 25°C is 23.8 mmHg. Draw a conclusion on your answer whether the milk powder is in the category of low, intermediate, or high-moisture foods.	[CLO1,PLO1,C4]	3
3	(a)	Construct the water activity and reaction rate relationship graph for food stability.	[CLO1,PLO1,C3]	2
	(b)	How does hydrogenation occur in vegetable oils, and how does it change the texture and shelf stability of food products?	[CLO1,PLO1,C3]	3
4	(a)	What is saturated and unsaturated fatty acids?	[CLO1,PLO1,C2]	2
	(b)	Identify the significance of the following tests in fats: (i) Acid Value (ii) Peroxide Value (iii) Saponification Value	[CLO1,PLO1,C3]	3
5	(a)	Define carbohydrates with example.	[CLO1,PLO1,C1]	1
	(b)	What do you understand by epimer and isomer of sugar? Provide one example each of an epimer and an isomer of sugar, and draw their structures.	[CLO1,PLO1,C3]	2
	(c)	Differentiate between amylose and amylopectin based on their structural properties.	[CLO1,PLO1,C4]	2