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Daffodil International University

Department of Nutrition and Food Engineering
Faculty of Health and Life Sciences
B.Sc. in Nutrition and Food Engineering
Final Examination Fall 2025

Course Code: 0511-1105
Level and Term: L-1, T-1
Time: 2 hours

Section: 253 All

Course Title: Basic Human Nutrition
Course Teacher Initials: FA, MMS,TA
Total Marks: 40

Splitting any answer is strictly prohibited

				Marks
1	(a)	Why some ω-3 (EPA, DHA) fatty acids are considered conditionally essential fatty acids and find out the metabolic pathways involved in their conversion.	[CLO3,PLO1,C1]	2+2
	(b)	Explain the progressive changes with consequences in the arteries that lead to artery narrowing and impaired blood flow.	[CLO3,PLO1,C3]	4
2	(a)	A 6-year-old child and a 16-year-old teenager both weigh 40 kg. Using the DRI protein recommendations, which person needs more grams of protein per day, and by how much?	[CLO3,PLO1,C1]	4
	(b)	Why is mutual supplementation of protein important for certain groups of people? Use two examples to explain this.	[CLO3,PLO1,C3]	2+2
3	(a)	Explain the role of retinol in the visual cycle and illustrate the process with a labeled diagram.	[CLO4,PLO1,C1]	4
	(b)	Describe how calciferol deficiency leads to skeletal deformities in the upper extremities.	[CLO4,PLO1,C2]	4
4	(a)	Interpret how niacin deficiency leads to the 4 Ds and evaluate the impact of this disease on human health.	[CLO4,PLO1,C4]	4
	(b)	Describe sources of folic acid and the impact of folate deficiency on a pregnant woman.	[CLO4,PLO1,C4]	2+2
5	(a)	Write the functions of iodine in body with its deficiency symptoms.	[CLO4,PLO1,C1]	4
	(b)	Mention the functions of calcium and phosphorus apart from their roles in bone and teeth formation.	[CLO4,PLO1,C4]	2+2