Daffodil International University

Department of Genetic Engineering and Biotechnology
Faculty of Health and Life Sciences
B. Sc. (Hons.) in Genetic Engineering and Biotechnology
Midterm Examination Summer 2026

Course Code: 0512-2203 **Course Title:** Plant Physiology
Level and Term: L2, T2 **Section:** 251 (A+B) **Course Teacher Initials:** AR
Time: 1 Hour 30 Minutes **Total Marks:** 25

Answer the Following Questions: Marks

1	(a)	Define colloid. Classify colloidal states in plants.	[CLO3, PLO1, C2]	2.5
	(b)	Differentiate between diffusion and osmosis.	[CLO3, PLO1, C4]	2.5
2	(a)	What is apoplastic pathway? Mention the external factors affecting water absorption.	[CLO3, PLO2, C2]	2.5
	(b)	Distinguish between transpiration and guttation.	[CLO3, PLO1, C4]	2.5
3	(a)	Define transpiration. Classify transpiration with examples.	[CLO3, PLO1, C1]	3.0
	(b)	Describe the structure of stomata with figure.	[CLO3, PLO2, C5]	2.0
4	(a)	Mention the source, functions and deficiency symptoms of two macronutrients.	[CLO3, PLO1, C1]	2.0
	(b)	Explain the Lundegardh's Theory of active mineral absorption.	[CLO3, PLO2, C2]	3.0
5	(a)	Define photosynthesis. Write the components of photosynthesis.	[CLO1, PLO2, C3]	2.0
	(b)	Discuss how C4 plants assimilate CO_2 to produce carbohydrate.	[CLO1, PLO2, C6]	3.0