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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 Fall 2025

Course Code: 0512-1201
Level and Term: L-1, T-2
Time: 1 hour 30 minutes

Section: 252 (A+B)

Course Title: Principle of Genetics
Course Teacher Initials: MZA and DSR
Total Marks: 25

Splitting any answer is strictly prohibited

				Marks
1	(a)	Define the terms gene, Alleles, Locus, Genotype and Phenotypes, Polycistronic.	[CLO1, PLO1, C2]	3
	(b)	Discuss the importance and application of genetics in mankind.	[CLO1, PLO1, C1]	2
2	(a)	Summarize Mendels' Law of Segregation and Law of Dominance with examples.	[CLO1, PLO1, C2]	3
	(b)	Write a short note on golden rice.	[CLO1, PLO1, C1]	2
3	(a)	What do you understand by the term 'Mutation'? What are types of mutation? Mention positive and negative effects of gene mutation	[CLO2, PLO2, C2]	3
	(b)	Compare translocation and crossing over in terms of process and genetic effects	[CLO3, PLO2, C3]	2
4	(a)	Briefly discuss on genetic code, lethal genes, and epistasis.	[CLO3, PLO2, C2]	3
	(b)	Explain the process of alternative splicing with a diagram.	[CLO6, PLO3, C4]	2
5	(a)	Discuss on maternal inheritance.	[CLO5, PLO4, C2]	3
	(b)	Suppose A gene is in locus 11p24 and B is in locus 4q15. What does it mean?	[CLO4, PLO4, C2]	2