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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 Summer 2026

Course Code: 0512-2105
Level and Term:L-2, T-1
Time: 1 Hour 30 Minutes

Section: 252 (A+B)

Course Title: Animal Breeding
Course Teacher's Initials: KMH, SBN
Total Marks: 25

Answer the following questions:

				Marks
1	(a)	Explain the major applications of animal breeding and genetics in livestock improvement.	[CLO2, PLO1, C2]	2.5
	(b)	What is domestication and why it matters? Discuss the core functions of breed associations, highlighting their role in geneti improvement.	[CLO1, PLO2, C1]	2.5
2	(a)	What is breed? Classify breeding methods of farm animals and briefly discuss them.	[CLO2, PL... ...]	3.0
	(b)	Explain the terms gene editing (CRISPR-Cas9), machine learning & precision livestock farming and state their key applications.	[CLO1, PLO1, C2]	2.0
3	(a)	Discuss the breed structure and its practical implications in farm animals.	[CLO2, PLO1, C6]	2.5
	(b)	State the mating strategies used in farm animals and explain the methods for controlling inbreeding.	[CLO2, PLO2, C5]	2.5
	(a)	What is sex determination? Elucidate the chromosomal mechanisms of sex determination in farm animals.	[CLO3, PLO1, C2]	2.0
	(b)	Briefly discuss the concepts of free martin, intersexes and super-sexes in farm animals. XD, XXX	[CLO3, PLO1, C6]	3.0
	(a)	Why are sex-linked traits important in animal genetics? Describe the sex-linked traits observed in farm animals.	[CLO3, PLO1, C1]	2.5
	(b)	Discuss sex-influenced traits and sex-limited traits in farm animals.	[CLO3, PLO1, C6]	2.5

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