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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: 0512-2103 **Course Title:** Cytology
Level and Term: L-2, T-1 **Section: 252 (A+B)** **Course Teacher Initials:** HKC
Time: 1 Hour 30 Minutes **Total Marks:** 25

Answer the following questions:

		Marks
1. (a) Define cytology. How do you connect cytology and biotechnology?	[CLO1, PLO2, C1]	3
(b) Illustrate the functions of protoplasm. State the protoplasm theory.	[CLO1, PLO2, C2]	2
2. (a) How do you relate the cellular organelles and molecular biology.	[CLO1, PLO2, C1]	3
(b) Define cytogenetics. Simplify the different types of genetic disorders.	[CLO1, PLO2, C4]	2
3. (a) Illustrate the numerical abnormalities of chromosomes.	[CLO1, PLO2, C3]	4
(b) Briefly explain the chromosome banding pattern.	[CLO1, PLO2, C2]	1
4. (a) What is karyotyping? Briefly discuss the process of karyotyping with figures and clinical applications.	[CLO1, PLO2, C1]	3
(b) Explain the molecular effectivity of nucleus.	[CLO1, PLO2, C2]	2
5. (a) Suggest the first sight chemistry of chromosomes which relate molecular sciences.	[CLO1, PLO2, C5]	3
(b) Discuss the Cri-Du-Chat syndrome.	[CLO1, PLO2, C6]	2