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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
Final Examination Fall 2025

Course Code: 0611-1209 | **Course Title: Computer Fundamentals and Computational Biology**

Level and Term: L-1, T-2 | **Section: 252 (A+B)** | **Course Teacher Initials: DNH**

Time: 2 Hours | **Total Marks: 40**

Splitting any answer is strictly prohibited

				Marks
1	(a)	List three key features of Microsoft Excel and briefly explain one of them.	[CLO2, PLO1, C4]	3
	(b)	Discuss the IF function in Excel. Write the syntax and give a biological example of its use.	[CLO2, PLO1, C6]	3
	(c)	What is a PivotTable in Excel? State one advantage of using it in data analysis.	[CLO2, PLO1, C1]	2
2	(a)	Explain the ΔΔCt method for analyzing qPCR data in Excel.	[CLO1, PLO2, C2]	3
	(b)	List the components of the PowerPoint interface.	[CLO3, PLO2, C4]	2
	(c)	Describe the steps to create a new presentation and apply a design theme.	[CLO3, PLO1, C6]	3
3	(a)	What is Microsoft PowerPoint? Explain the design tips for creating effective PowerPoint slides in an academic presentation.	[CLO3, PLO2, C1]	3
	(b)	Differentiate between *Transitions* and *Animations* in PowerPoint. Write the common keyboard shortcuts used in PowerPoint and their functions.	[CLO3, PLO2, C4]	5
4	(a)	What is genomics? Write the major computational applications in genomics.	[CLO2, PLO1, C1]	3
	(b)	What is Whole-Cell Modeling? Write the computational applications of systems biology.	[CLO3, PLO2, C1]	3
	(c)	Explain the computational applications in the field of clinical and medical sectors.	[CLO3, PLO1, C5]	2
5	(a)	Why computational toolkits are essential in the field of biological science.	[CLO3, PLO2, C1]	2
	(b)	What is NCBI? Describe the major databases of NCBI.	[CLO1, PLO2, C6]	4
	(c)	What are the components of a FASTA & FASTQ formatting?	[CLO1, PLO1, C1]	2

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