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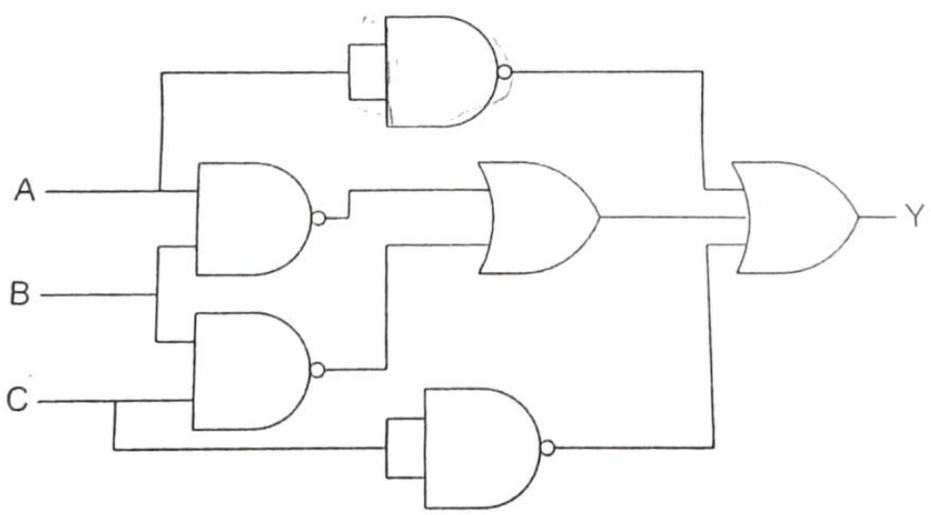
Daffodil International University

Faculty of Science & Information Technology
Department of Computer Science and Engineering
Final Semester Examination, Spring-2024
Course Code: CSE112 Course Title: Computer Fundamentals
Level:1 Term:1 Batch-66

Exam Duration: 2 Hours **Marks: 40**

Answer ALL the Questions

[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]

1.	a)	Imagine you are a logic circuit designer for a well-known technology company. Your task is to redesign a complex logic circuit to reduce manufacturing costs without sacrificing performance. Here's the original circuit you're tasked with redesigning. Now, **develop** a more cost-effective logic circuit solution.  	[6]	CO3
	b)	Now, **generate** the truth table for the output expression and then **compare** it with the simplified expression.	[4]	
2.	a)	**What** is variable and **explain** the types of variables with proper coding example.	[4]	CO4
	b)	The CSE teacher want to make a list of only those students who have passed (obtained 40% or more marks) in the final examination. In the end, he also wants to print out the total number of students who have passed. Assuming that the input data of all the students is terminated by a trailer record, which has sentinel value of 241-15 for student ID. Now, your job is to **write** the algorithms and **draw** a flowchart to help the teacher.	[6]	

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3.	a)	**Why** is the OS important? Explain- **How** does the OS provide security to the data and information?	[5]	CO1
	b)	Emily works for a multinational corporation with offices located in different cities worldwide. To ensure seamless communication and data sharing between offices, Emily decides to establish dedicated connections between each office using leased lines. Each office has a direct connection to the main headquarters, forming a fully interconnected network. **Identify** the network topology used in Emily's setup and **explain** its suitability for inter-office communication.	[5]	
4.		A government agency's website was hacked, and false information was posted, causing public panic and misinformation. **Identify** the type of cyber-attack involved in this incident and discuss the impact on public trust in government institutions. **Propose** measures the agency can take to restore public confidence and prevent future attacks on its website	[10]	CO1

<< *Best of Luck* >>