



Daffodil International University
Faculty of Science & Information Technology
Department of Computer Science & Engineering
Midterm Examination, Fall 2026
Course Code: CSE112 , Course Title: Computer Fundamentals
Level:1 Term:1 Batch: 73

Time: 01:30 Hrs

Marks: 25

Answer ALL 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)	Describe the roles and responsibilities of a QA Engineer, Data Administrator and Users in the software development process.	3	CO1
	b)	Indicate 4 differences between Primary Storage and Secondary Storage.	2	
	c)	During the 1st-Semester Final Examination, a student receives the following marks in four subjects: <ul style="list-style-type: none">English = $(81.67)_9$IBCC = $(1001110)_2$Mathematics = $(1001.2)_4$Computer Fundamentals = $(322)_5$ Calculate the student's total marks in all four subjects and express the final answer in base 6.	5	
	d)	Draw the circuit diagram of the following function using NOR gates only. $F(x,y,z) = xy + zy'$ You cannot simplify the function. Just implement whatever is given in the question.	4	
	e)	Divide $(625431)_7$ by $(156)_7$ using the base-7 division method. Do not convert the numbers to decimal. Find the quotient and remainder.	3	
2.	a)	Nowadays, AI tools are widely used for academic tasks, programming, content creation, and problem-solving. However, to get accurate and useful results, users need to write clear and effective prompts. At the same time, they must be aware of ethical issues such as bias, privacy violations, and the misuse of AI-generated content. <ul style="list-style-type: none">i. Explain the importance of prompt engineering in obtaining effective results from AI tools.ii. How can users reduce ethical risks when using AI tools?	2+2	CO2

Handwritten notes and diagrams:

Diagram 1: A logic diagram showing inputs x and y connected to a NOR gate. The output is labeled $(x+y)'$.

Diagram 2: A logic diagram showing inputs x and y connected to two NOR gates. The outputs are labeled $(x+y)'$ and $(x+y)'$.

Diagram 3: A logic diagram showing inputs x and y connected to two NOR gates. The outputs are labeled $(x+y)'$ and $(x+y)'$.