Daffodil International University
Faculty of Science & Information Technology
Department of Computer Science and Engineering
Mid Examination, Spring 2025
Course Code: CSE414   Course Title: Web Engineering
Level: 4   Term: 2   Batch: 60

Time: 1:30 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)	A software development team has just completed building a new web application. Before the app is launched, the team performs various checks to ensure that all features are functioning as specified in the project requirements, such as the login feature and search function. They also test whether the app is compatible with different devices and operating systems. Based on the scenario, describe the difference between verification and validation in the web app development process.	[3]	CO2
	b)	During the development of a new website, the team follows a structured approach to ensure the site is free of defects, conducting various tests at different stages, from initial development to post-launch updates. Based on your understanding, demonstrate how many stages of testing are involved in the website development process.	[3]	
	c)	A company is planning to deploy a large-scale application across multiple servers and locations to improve performance and fault tolerance. They are exploring various options for structuring the system to support this distributed setup. What types of distributed systems are you familiar with, explain the benefits of each.	[4]	

2. Nexora Tech is managing an online store that sells various tech products. They need to create a table to display product details, including the product ID, name, price, and availability information while organizing the data with clear rows and columns. Considering their needs construct the following table using proper HTML, and CSS code. **[7] CO3**

Product ID	Product Information		Availability
	Name	Price	
101	Smartphone	$799	• In Stock • Available Online
	Smartphone Pro	$999	
102	Laptop	$1299	• In Stock • Available in Stores
103	Tablet	$499	• Limited Stock
	Tablet Pro	$649	

3. A university is developing an online registration system for students. Before submitting the form, the system should validate the following: the Name must be at least 3 characters long, the Email must follow a valid format, the Password must be at least 6 characters long, and the Confirm Password must match the Password. Write JavaScript code to apply input validations and display appropriate error messages for each invalid entry. **[8] CO3**

Name: [   ]
Name must be at least 3 characters long
Email: [   ]
Please enter a valid email address
Password: [•••]
Password must be at least 6 characters long
Confirm Password: [   ]
Confirm Password must match Password.
Submit