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Daffodil International University
Faculty of Science & Information Technology
Department of Software Engineering
Midterm Examination, Summer 2026
Course Code: SE321; Course Title: Software Engineering Web Application
Sections & Teachers: 42 (A,B,C - SBA), (D,E,J - MRN), (F,G - SSA), (H,I – SSR)
Time: 1 Hour 30 Mins **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 student is trying to access a research article from the university website. The teacher provides the following link: **https://library.diu.edu.bd/research/AI/deep_learning.html** **Analyze** the anatomy of the given URL and explain how it helps the student locate the specific web page or file, rather than only visiting the main domain of the website.	**[Marks-5]**	**CLO-2** ***Level-4***
	b)	A customer adds several products to the shopping cart of an online shopping website. After leaving the website and revisiting it two weeks later, the customer finds that all previously selected products are still present in the cart. **Illustrate** the step-by-step transaction mechanism between the browser and the shopping website server that allowed the platform to identify how this functionality is possible despite HTTP being a stateless protocol. Explain the role of cookies in maintaining user-specific information.	**[Marks-5]**	
2.	***a)***	DIU's student portal handles a "Course Drop" request. When an authorized student clicks the "Drop Course" button on their screen, the system must process this command: it captures the click, evaluates if the request falls within the allowed academic calendar deadline, runs a command to check and delete the enrollment record in the persistent storage, and finally redraws the updated class schedule table showing the course successfully removed. **Classify** which exact component (**Model**, **View**, or **Controller**) is responsible for each of the task mentioned above in the scenario and explain the whole Course Drop request process through the **MVC** lifecycle.	**[Marks-5]**	**CLO-3** ***Level-3***

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	b)	**Construct** an HTML registration form for a university workshop using a table layout. The form should include fields for Participant Name, Email Address, and Contact Number. There should also be a Preferred Workshop Topics using checkboxes. Finally, the form must contain both a Submit button and a Reset button to allow users to submit the form or clear the entered information. The code Output should be:	[Marks- 5]	CLO- 3 *Level- 3*

University Workshop Registration Form

Participant Name	
Email Address	
Contact Number	
Preferred Workshop Topics	☐ Artificial Intelligence ☐ Web Development ☐ Data Science
Submit Reset	

3.	*a)*	You are developing a small password validation system for a website. Each user creates a password during registration. **Develop** a JavaScript program using basic DOM manipulation that: 1. Takes a password from an HTML input field. 2. Checks the length of the password when the user clicks a button. 3. Displays the result on the webpage. Conditions: • If the password is less than 5 characters, show: "Password Unacceptable" • If the password is 5 to 10 characters, show: "Weak Password" • If the password is more than 10 characters, show: "Strong Password" Sample Output Example - Input: abc Output: Password Unacceptable	[Marks-5]	CLO- 4 *Level- 6*