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Daffodil International University

Faculty of Science & Information Technology

Department of Computer Science & Engineering

Final Semester Examination, Spring 2025

Course Code: CSE414, Course Title: Web Engineering

Level: 4 Term: 2 Batch: 60

Time: 2:00 Hrs **Marks: 40**

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 web file contains three objects: X, Y, and Z. These objects have 3, 2, and 7 components, respectively, and require 7ms, 4ms, and 5ms to load each component. Additionally, the base file takes 11ms to load on the client side. The TCP protocol is used, with a round-trip time (RTT) of 70ms. Now calculate, what will be the total response time in both non-persistent and persistent pipelining modes?	**[5]**	**CO1**
	b)	A developer is starting a new web project and is considering which server-side language to use. They come across PHP and wonder about its flexibility and how it handles data types. This raises two key questions: Why is PHP called a loosely typed language, and what are the reasons for choosing PHP for server-side development - explain based on your understanding.	**[5]**	
	c)	A software development team is working on a new web application with a tight deadline. As the project progresses, they face issues like scope changes, resource constraints, and communication gaps among team members. Identify what challenges may arise during project management?	**[5]**	
	d)	A developer is working on a web application that includes a contact form and a search bar. They notice that the form submits data using the POST method, while the search functionality uses the GET method. Based on your understanding illustrate why are GET and POST methods are called superglobals, and what are the key differences between them?	**[5]**	
2.		A non-profit organization, HopeGivers Foundation, wants to develop a website to streamline its donation collection process. They aim to provide an easy-to-use form where donors can submit their contributions, which will be securely saved in their database. Additionally, they want to feature the highest donor of the previous day, displaying their name and donation amount on a dedicated page to encourage more contributions. The website should be user-friendly, secure, and capable of handling multiple transactions efficiently. To achieve this, they need a well-structured backend system that can process and store donation records while dynamically updating the highest donor information.		**CO4**
	a)	To complete a successful donation, the required fields include the donor's full name, email address, donation amount, payment method (selectable via a dropdown with options: Bkash, Nagad, Card, Bank), transaction ID, and donation date and time. Phone number and address are optional fields. Additionally, donors should have the option to make their donation anonymous, which can be implemented using a radio button. Now, propose a form design and develop it using HTML.	**[5]**	

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	b)	After submitting the form, the donation data should be stored in a database named Donations. To achieve this, develop the necessary server-side functionality using PHP to process the form data and save it into the database.	**[5]**	
	c)	Based on the scenario's requirements, propose a view to display the top donor from the previous day. Then, develop the necessary server-side PHP code to fetch the data from the Donations database, ensuring that anonymous donations are excluded. Finally, construct an HTML and CSS-based view page that aligns with the proposed design, effectively presenting the highest donor's name and donation amount.	**[10]**	

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