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End Semester Examination 2024

Name of the Course: BCA

Semester: 4th

Name of the Paper: Web Technologies

Paper Code: TBC 404

Time: 3 Hour's

Maximum Marks: 100

Note:

- (i) All Questions are compulsory.
- (ii) Answer any two sub questions among a,b and c in each main question.
- (iii) Total marks in each main question are twenty.
- (iv) Each question carries 10 marks.

Q1	(10 X2 = 20 Marks)	
(a)	Explain the significance of the World Wide Web in revolutionizing how information is accessed and shared online. Compare and contrast the early web browsing experience with today's standards.	CO1, CO2, CO3
(b)	Detail the structure and purpose of HTML and its importance in web page creation. Also, create a web page for you university.	
(c)	Discuss the evolution of email and its role in modern communication. Explain the functions of SMTP, POP3, and IMAP protocols in email delivery and retrieval.	
Q2	(10 X2 = 20 Marks)	
(a)	Explain the purpose of forms in HTML and how they are used to collect user input. Describe the <form>, <input>, <select>, <textarea>, and <button> tags, and their attributes for creating various form elements.	CO3
(b)	Introduce the concept of Cascading Style Sheets (CSS) and its role in styling HTML documents. Discuss the three ways of introducing CSS to a document: inline, embedded, and external stylesheets.	
(c)	Describe the basic syntax of CSS rules, including selectors, properties, and values. Provide examples of how CSS rules are used to style text, backgrounds, borders, and other elements on a web page.	
Q3	(10 X2 = 20 Marks)	
(a)	Discuss the concept of XML Document Object Model (DOM) and its role in representing XML documents as a tree structure in memory. Explain how XML DOM provides a programming interface for accessing and manipulating XML data.	CO4
(b)	Explain the concept of Document Type Definition (DTD) in XML and its role in defining the structure and constraints of an XML document. Discuss how DTDs are used to validate XML documents against a predefined schema.	
(c)	Compare and contrast HTML and XML in terms of their purpose, syntax, and usage. Explain how HTML is used for presenting and formatting web content, while XML is used for structuring and describing data.	
Q4	(10 X2 = 20 Marks)	
(a)	Create a student registration form that includes at least 10 different form elements, such as text fields, dropdowns, checkboxes, radio buttons, etc. Then, use JavaScript to validate the form to ensure that no fields are left empty and that certain fields match specific patterns, such as email addresses or phone numbers.	CO4, CO5
(b)	Discuss the concept of external JavaScript files and how they are linked to HTML documents using the <script> tag. Explain the benefits of using external JavaScript files for code organization and reuse.	
(c)	Explain the Document Object Model (DOM) in JavaScript and its role in representing the structure of HTML and XML documents as a tree of objects. Discuss how JavaScript can be used to manipulate the DOM to dynamically update web pages.	
Q5	(10 X2 = 20 Marks)	
(a)	Explain the basics of PHP and its role in web development. Discuss how PHP differs from client-side scripting languages like JavaScript and how it is used to create dynamic web pages.	CO5, CO6
(b)	Create a simple PHP web page that demonstrates the use of PHP tags and how PHP code is embedded within HTML. Explain the purpose of the <?php ?> tags in separating PHP code from HTML.	
(c)	Describe how PHP forms are used to collect user input on a web page. Explain the process of creating a form in HTML and processing form data using PHP.	