

15 MAY 2025 (CE)

24BCA023

NCU/FRM/2.6/ACAD/027

 THE NORTHCAP UNIVERSITY	Question paper for Major Test School of Engineering & Technology	Review Date:
	Programme Name: BCA Course Name: Fundamentals of web development Course Code: BCL222 Semester: Even, 4th Semester	Session: Jan-May 2026
		Maximum Marks: 100 Duration: 3 hrs
		Sheet 1 of 2
Note: 1. All the questions are compulsory. 2. Marks and COs are indicated against the questions.		
CO1: Design a basic page by using HTML5, CSS2 and CSS3.		
CO2: Design a responsive website by using Bootstrap.		
CO3: Design dynamic web page using JavaScript (JS).		
CO4: Integration of server-side JavaScript Programming and Database.		
CO5: Gain confidence to create dynamic website on real world problems.		

SECTION A (5 × 5 = 25 Marks)

Q. No.	Question	Marks	CO's
Q1.	Describe inline, internal, and external CSS with suitable examples.	5	CO1
Q2.	What are dynamic selectors in CSS? Explain any three with suitable examples.	5	CO2
Q3.	Write a program in JavaScript to change the background color of a web page when a button is clicked.	5	CO4
Q4.	Explain the event-driven, non-blocking I/O architecture of Node.js runtime environment with a neat diagram.	5	CO4
Q5.	Explain multimedia tags in HTML5 with examples.	5	CO1

SECTION B (6 × 10 = 60 Marks)

Q6.	a) What are cookies. Explain with an example. b) Write a program in JavaScript to create and delete cookie.	5+5= 10.	CO5
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Q7.	(a) What are modules in Node.js runtime environment? Explain their purpose and types. (b) Write a program in JavaScript using Node.js to determine whether the user is Windows, Linux, or macOS user.	5+5= 10	CO4
Q8.	Create a registration form using HTML, CSS, and JavaScript with the following requirements: - Fields: Name, Email, Password - Validate that all fields are filled - Email should be in a valid format - Password must be at least 6 characters long - Display error messages dynamically	10	CO4
Q9.	(a) Explain Document Object Model (DOM) manipulation methods with examples. (b) Differentiate console.log () and console. Dir ()	7+3= 10	CO4
Q10.	Explain a) Transitions in CSS b) Lists in HTML	5+5= 10	CO2
Q11.	Differentiate 1) QuerySelector () and QuerySelectorAll () 2) <div> and tag	5+5= 10	CO3
SECTION C (15 marks)			
Q12.	✗ Create a Node.js program using the fs module to perform basic file operations. Requirements: 1. Create a file named data.txt and write the text: "Customer Records" using synchronous as well as asynchronous mode. 2. Read the content of the file in both synchronous and asynchronous mode) and display it on the console. 3. Append the text: " Log-in Details" to the same file.	6+6+3 =15	CO5

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