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Question Paper Code	13892
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B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2025
 Seventh Semester
Computer Science and Engineering
 (Common to Computer Science and Engineering (Cyber Security))
20AIOE907 - FULL STACK DEVELOPMENT
 Regulations - 2020

Duration: 3 Hours

Max. Marks: 100

PART - A (MCQ) (10 × 1 = 10 Marks)

Answer ALL Questions

	Marks	K- Level	CO
1. Which part of "Cascading Style Sheets" refers to the priority rules of CSS? (a) Cascading (b) Style (c) Sheet s (d) All of the above	1	K1	CO1
2. Select the HTML5 tag used to define a navigation menu (a) <nav> (b) <menu> (c) <div> (d) <header>	1	K1	CO1
3. Which JavaScript keyword is used to declare a block-scoped variable? (a) var (b) let (c) const (d) function	1	K1	CO2
4. How do you write a comment in JavaScript? (a) <! -- Comment --> (b) // Comment (c) /* Comment */ (d) Both b and c	1	K1	CO2
5. Relate the core node.js module used to create a web server (a) fs (b) path (c) http (d) url	1	K1	CO3
6. Find the command used to install all dependencies listed in a package.json (a) npm install (b) node install (c) npm init (d) node start	1	K1	CO3
7. In Typescript which type would you use to allow a variable to be either a string or a number? (a) any (b) Enum (c) Tuple (d) Union	1	K1	CO4
8. In React, what are props primarily used for? (a) Managing internal mutable data within a component (b) passing data from a parent component (c) handling style effects (d) Defining component styling	1	K1	CO4
9. Mention the protocol primarily used for communication between MailBagClient and MailBagServer (a) FTP (b) HTTP (c) SMTP (d) TCP	1	K1	CO5
10. Select which Docker command is used to stop a running container? (a) docker halt (b) docker stop (c) docker kill (d) docker pause	1	K1	CO6

PART - B (12 × 2 = 24 Marks)

Answer ALL Questions

11. How do you create a numbered list in HTML?	2	K1	CO1
12. What is the purpose of the <section>tag in HTML5?	2	K1	CO1
13. How do you link an external JavaScript file to HTML?	2	K2	CO2
14. Write a JavaScript arrow function to multiply two numbers.	2	K2	CO2
15. Name two built in Node.js and state their primary purpose.	2	K1	CO3
16. List the steps to install and configure Webpack in a Node project.	2	K1	CO3
17. What is JSX in React? State one key advantage of using it.	2	K1	CO4
18. Define TypeScript Enums with an example.	2	K1	CO4
19. State the advantage of using Redux in MailBagClient applications.	2	K1	CO5
20. Label the purpose of middleware in Express.js server.	2	K1	CO5

21. What is Docker file and list its two essential instructions. 2 K1 CO6
22. Recall the use of containerization in application deployment. 2 K1 CO6

PART - C (6 × 11 = 66 Marks)

Answer ALL Questions

23. a) Explain CSS Grid with a practical layout and compare Grid with Flexbox layout. 11 K2 CO1
- OR**
- b) Discuss the importance of semantic HTML in forms and create an HTML5 form which contains the fields name, email, and a submit button. Style it with CSS. 11 K2 CO1
24. a) Explain the basic features of JavaScript and write a program to display an alert message “Welcome to My Website” when the page is loaded. 11 K2 CO2
- OR**
- b) Write a short note on the Document Object Model (DOM) in JavaScript. Identify and write a JavaScript code to change the background colour of a webpage when a button is clicked. 11 K2 CO2
25. a) Demonstrate Node.js Web Server using HTML page bundled with Webpack. 11 K2 CO3
- OR**
- b) Design a Node.js program using HTTP module to create a simple web server that displays “Hello World”. 11 K2 CO3
26. a) Configure a Webpack build for a Node.js project that uses multiple entry points. Write a basic webpack.config.js file that defines an entry point (./src/index.js) and an output path (./dist/bundle.js). 11 K3 CO4
- OR**
- b) Develop a React program to create a student profile card using props, state and TypeScript typing. 11 K3 CO4
27. a) Explain the purpose of Node.js and NPM in a development environment. How do they help developers to manage projects? 11 K2 CO5
- OR**
- b) Discuss the role of version control (Git) and package managers (npm/yarn) in managing a full stack development project. 11 K2 CO5
28. a) Explain the MailBag client setup. How can front-end components interact with the Node.js server to display mail data? 11 K2 CO6
- OR**
- b) Illustrate the process of deploying a web application using Docker Hub. Also Explain how containerization helps in deploying full stack applications efficiently. 11 K2 CO6