

Reg. No.

Question Paper Code

13456

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2025

Sixth Semester

Artificial Intelligence and Data Science

(Common to Computer and Communication Engineering)

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. Where is the internal CSS code placed in an HTML document? (a) Within the < link > element (b) Within the < style > element (c) Within the < body > section (d) Within the < head > section	1	K1	CO1
2. Which of the following is used to bold the text? (a) (b) < b /> (c) < p /> (d) 	1	K1	CO1
3. Javascript is a _____ language. (a) Application (b) Scripting (c) Platform dependent (d) Programming	1	K1	CO2
4. The "function" and " var" are known as _____. (a) Keywords (b) Data types (c) Declaration statements (d) Prototypes	1	K1	CO2
5. What is the default package manager for Node.js? (a) Yarn (b) npm (c) Pip (d) Composer	1	K1	CO3
6. Which module is used for working with file paths? (a) http (b) fs (c) path (d) url	1	K1	CO3
7. What is JSX in React? (a) A JavaScript XML syntax extension (b) A state management tool (c) A database query language (d) A styling framework	1	K1	CO4
8. Which React method is used to render components? (a) ReactDOM.create() (b) React.render() (c) ReactDOM.render() (d) render()	1	K1	CO4
9. Which file extension is used for TypeScript files? (a) .js (b) .ts (c) .jsx (d) .html	1	K1	CO5
10. Which database is commonly used in NoSQL applications? (a) MySQL (b) PostgreSQL (c) MongoDB (d) SQLite	1	K1	CO6

PART - B (12 × 2 = 24 Marks)

Answer ALL Questions

11. Define the purpose of CSS animations.	2	K2	CO1
12. Write the syntax for adding an image in HTML.	2	K1	CO1
13. Define function in JavaScript.	2	K2	CO2
14. List the difference between let and const.	2	K2	CO2
15. Define the concept of middleware in Node.js.	2	K2	CO3
16. Write the role of the 'events' module in Node.js.	2	K1	CO3
17. List the difference between state and props.	2	K2	CO4
18. State the significance of the Virtual DOM in React.	2	K1	CO4
19. List the difference between TypeScript and JavaScript.	2	K2	CO5
20. Write the main features of Webpack.	2	K1	CO5
21. List the difference between Docker images and containers.	2	K2	CO6

22. List out the basic requirements for setting up MailBagClient. 2 K2 CO6

PART - C (6 × 11 = 66 Marks)

Answer ALL Questions

23. a) Discuss the importance of HTML forms in web development and provide examples of form elements. 11 K3 CO1

OR

b) Develop a Simple Ecommerce Webpage. 11 K3 CO1

24. a) Explain the way in which java script handles arrays with example. 11 K2 CO2

OR

b) Explain the different JavaScript data types with examples. 11 K2 CO2

25. a) Explain the event loop in Node.js with an example. 11 K2 CO3

OR

b) Implement a RESTful API with CRUD operations using Node.js. 11 K2 CO3

26. a) Build a weather app using React and external APIs. 11 K3 CO4

OR

b) Implement and explain the use of React component life cycle. 11 K3 CO4

27. a) Demonstrate the use of TypeScript decorators with a class example. 11 K2 CO5

OR

b) Explain the Webpack bundling process step by step. 11 K2 CO5

28. a) Explain the role of NoSQL databases in modern web applications. 11 K2 CO6

OR

b) Explain a dashboard component in MailBagClient that visually displays statistics like the number of sent mails, received mails, and failed deliveries. 11 K2 CO6