Code: 20CS3603

III B.Tech - II Semester – Regular / Supplementary Examinations APRIL 2024

MERN STACK DEVELOPMENT
(COMPUTER SCIENCE & ENGINEERING)

Duration: 3 hours   Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.
2. All parts of Question must be answered in one place.

BL – Blooms Level   CO – Course Outcome

			BL	CO	Max. Marks
UNIT-I					
1	a)	Describe the basic structure of a Node.js server and its role in web development.	L2	CO1	7 M
	b)	Explain about the Node.js-to-Angular stack in detail.	L2	CO1	7 M
OR					
2	a)	Explain about the manipulation string and working with arrays.	L2	CO1	7 M
	b)	Discuss the importance of error handling in JavaScript and provide examples of common error-handling techniques.	L2	CO1	7 M
UNIT-II					
3	a)	Discuss the significance of Node packages (npm) in Node.js development. How can developers leverage npm to enhance their projects?	L3	CO2	7 M

	b)	How do you create a basic Node.js application? Provide a step-by-step guide, including setting up the project structure and initializing a Node.js script.	L3	CO2	7 M
OR
4	a)	Demonstrate the member functions of the console module with example.	L3	CO2	7 M
	b)	Demonstrate how to publish, Install node.js packaged modules using the NPM Registry?	L3	CO2	7 M

UNIT-III

5	a)	Discuss the process of implementing HTTP clients and servers in Node.js. What are the key steps involved.	L3	CO2	10 M
	b)	What are the advantages of using HTTPS servers and clients in Node.js applications?	L3	CO2	4 M
OR
6	a)	How does Express simplify the process of building web applications in Node.js? Provide an overview of the key features that make Express a popular choice for developers.	L2	CO2	7 M
	b)	Describe the initial steps for getting started with Express in a Node.js project. What are the necessary setup procedures and configuration options?	L2	CO2	7 M

UNIT-IV

7	a)	What is React DOM, and how does it facilitate the integration of React with the browser's Document Object Model (DOM)?	L2	CO3	7 M
	b)	Discuss the concept of React components. How components are defined.	L3	CO3	7 M

OR

8	a)	Explain how JSX enhances the development experience in React. What is JSX, and how does it allow developers to write HTML-like syntax within JavaScript code?	L3	CO3	7 M
	b)	Describe the role of Babel in React development. Explain how does Babel transform JSX code into standard JavaScript that browsers can understand with suitable example.	L2	CO3	7 M

UNIT-V

9	a)	Describe the various data types supported by MongoDB. How does MongoDB handle different types of data, and what are some examples of these data types?	L3	CO4	7 M
	b)	Walk through the process of building a MongoDB environment. What are the essential steps involved in setting up MongoDB, particularly in conjunction with Node.js.	L3	CO4	7 M

		OR			
10	a)	Give an overview of the shell commands and methods commonly used to interact with MongoDB.	L2	CO4	7 M
	b)	Discuss the process of adding the MongoDB driver to a Node.js application. What are the steps required to install and configure the MongoDB driver for Node.js?	L3	CO4	7 M