**DHANEKULA INSTITUTE OF ENGINEERING & TECHNOLOGY**

Department of Computer Science & Engineering

**UNIT WISE QUESTION BANK**

Name of the Program : M.Tech in Computer Science & Engineering Academic Year: 2023-24

Year & Semester: I Year II Semester Section: A No of Credits: 03

Name of the Course:MEAN STACK **TECHNOLOGIES** Code: 23MCS212

Course: Core Regulation: D23

Course Area/Module: Programming No of students registered: 12

Name of the Faculty :: V.NAGA MALLESHWARO Designation: Asst Professor

**Unit-1**

1. Explain in detailed about List tag in HTML
2. Explain in detailed about table tag in HTML
3. Explain in detailed about Form elements: Text field, password, radio button, Check box
4. Explain in detailed about Form elements: date picker, drop down lists, range
5. Write about the HTML5 Global Attributes.
6. What is meant by HTML security?
7. What is meant by cross browser support?
8. Explain HTML5 Attributes & Events Vulnerabilities.
9. Explain XML Schemas?
10. Explain about Document object Models?
11. What is meant myXSLT?
12. Difference between DOM and SAX Approaches

**Unit-2**

1. Explain arrow function in JavaScript
2. Explain event handling in JavaScript
3. Explain Control statements in JavaScript?
4. Demonstrate the Primitives Operations and Expressions in JavaScript?
5. Illustrate Pattern Matching using Regular Expressions in JavaScript
6. What is angular Built in Pipes?
7. What is Arrays and Objects?
8. Explain strings in JavaScript?
9. Explain Angular JS Form Validation?
10. Explain Single Page Application development using Angular JS

**Unit-3**

1. What are the need and capabilities of node-js?
2. Illustrate the features of node-js?
3. Illustrate the fie operations in node-js
4. Explain how to Connect MongoDB with Mongoose
5. What are the Route and Query Parameters in express.js and in detail write about CRUD Operations
6. Illustrate the API Development in Express.js
7. Illustrate the Types of Middleware’s?
8. Explain Error Handling?
9. Explain Developing Template Engines in node-js?
10. Explain the task of Process Managers in node-js?

**Unit-4**

1. What is React.js and what problem does it solve in web development?
2. What are some common challenges faced when learning React.js, and how can they be overcome?
3. How does React maintain backward compatibility while introducing new features?
4. What are some strategies for staying updated with the latest changes and best practices in React.js?
5. How can tools like Create React App simplify the setup and configuration process?
6. What is meant by "Pure React," and why is it important to understand its principles?
7. What are some popular React router libraries and their key features?
8. How does React reconcile the Virtual DOM with the actual DOM?
9. What are React elements, and how do they differ from DOM elements?
10. What are React children, and how are they used in component composition?
11. How can data be passed into React components for rendering?
12. What are the real components? and how do they facilitate modular UI development?

**Unit-5**

1. What is MongoDB, and how does it differ from traditional relational databases?
2. What are the advantages and disadvantages of using MongoDB in a development project?
3. Describe the architecture of MongoDB, including components like mongod, mongos, and config servers.
4. How does MongoDB handle indexing for efficient query performance?
5. Discuss MongoDB's support for ACID transactions and its implications for data integrity.
6. Can you explain MongoDB's support for full-text search and aggregation pipelines?
7. Demonstrate how to perform CRUD operations (Create, Read, Update, Delete) in MongoDB using the MongoDB shell.
8. Explain how to set up and use MongoDB Compass for visualizing and interacting with MongoDB data.
9. Walk through the process of creating a new MongoDB database and user authentication.
10. Explain the differences between embedding documents and referencing documents in MongoDB.
11. What are the options for hosting MongoDB databases in a production environment?
12. What are some best practices for monitoring and scaling MongoDB deployments in the cloud?

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