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Reg. No. : ☐☐☐☐☐☐☐☐☐☐☐

Question Paper Code : 10844

M.C.A. DEGREE EXAMINATIONS, APRIL/MAY 2023.

Second Semester

MC 4201 – FULL STACK WEB DEVELOPMENT

(Regulations 2021)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1.   Why would you use flex-wrap CSS property and what values can it have?

2.   State the difference between GET and POST.

3.   List out the uses of JSON.

4.   Compare client-side programming and Server-side programming.

5.   List out the advantages of MongoDB.

6.   How to Connect Node.js to a MongoDB Database?

7.   What is the use of react JS?

8.   Differentiate between composition and inheritances in JS.

9.   Compare kubernetes and docker.

10. What is the meaning of virtual private cloud and write down its purpose.

PART B — (5 × 13 = 65 marks)

11. (a)   What are CSS selectors and what are the different types of selectors in CSS? Illustrate each one with suitable example.

                                          Or

     (b)   Explain different data types and variables in JavaScript. Also write JavaScript to display a given message and image for five seconds.

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12. (a) Demonstrate how to handle GET and POST requests using Express.

Or

(b) Develop an application to demonstrate file upload process in NodeJS.

13. (a) What is a cookie and how it works? Illustrate how to use HTTP cookies in a NodeJS application.

Or

(b) Illustrate how to fetch data from MongoDB and display it in a table using NodeJS.

14. (a) What is ReactDOM? How React and ReactDOM works? Write a code to demonstrate shopping cart buttons in ReactJS?

Or

(b) Explain the different phases of ReactJS components lifecycle. Also illustrate how to change the state of the components on click.

15. (a) What is Docker and Docker container and what for Docker is used? Describe the key elements within a doctor environment with diagram.

Or

(b) What is horizontal and vertical scalability? Summarize key differences and similarities between horizontal and vertical cloud scaling. Also outline how do you choose the right cloud scaling methodology for an organization?

PART C — (1 × 15 = 15 marks)

16. (a) What technologies are used for full stack developer? Develop a Web based online course registration system using full stack technologies considering client side and server side components.

Or

(b) What is full stack development? Assume that you are assigned the responsibility of developing a web application for online booking for vehicle services and washing. As a web developer clearly explain how to choose a technology stack for this web application development.

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