



End Term (Odd) Semester Examination December 2024

Roll no.....

Name of the Course and semester: MCA 1st Semester

Name of the Paper: Full Stack Development

Paper Code: TMC101

Time: 3 hour

Maximum Marks: 100

Note:

- (i) All the questions are compulsory.
- (ii) Answer any two sub questions from a, b and c in each main question.
- (iii) Total marks for each question is 20 (twenty).
- (iv) Each sub-question carries 10 marks.

Q1.

(2X10=20 Marks)

- a. Describe the key differences between HTML and XHTML. How does XHTML enforce stricter syntax rules? (CO-1)
- b. Create a complete XHTML webpage to showcase a university department, incorporating images, hyperlinks, and formatted text. (CO-1)
- c. Demonstrate how to use different XHTML tags (e.g., <table>, , <div>) to create a structured web page for a product catalog. (CO-1)

Q2.

(2X10=20 Marks)

- a. Explain the role of CSS in web development. Compare inline, internal, and external stylesheets with examples. (CO-1)
- b. Analyze the differences between various CSS selectors (e.g., class, id, pseudo-class) and their implications in dynamic styling. (CO-1)
- c. Design a responsive webpage using CSS, incorporating media queries for different screen sizes. (CO-1)

Q3.

(2X10=20 Marks)

- a. Develop a JavaScript program to validate a registration form with fields for name, email, and phone number. (CO-2)
- b. Analyze the role of the Document Object Model (DOM) in dynamic web development. Provide examples of DOM manipulation using JavaScript. (CO-2)
- c. Critique the limitations of JavaScript in handling complex events or animations compared to modern frameworks. (CO-2)

Q4.

(2X10=20 Marks)

- a. Analyze the differences between GET and POST methods in PHP, highlighting their advantages and use cases. (CO-3)
- b. Write a PHP script to create a simple login system with session handling. (CO-3)
- c. Evaluate the impact of PHP functions in creating modular and reusable code. Illustrate your answer with examples. (CO-3)

Q5.

(2X10=20 Marks)

- a. Describe the components of the MERN stack, explaining the role of each technology (MongoDB, Express.js, ReactJS, Node.js) in full-stack development. (CO-4)
- b. Explain the differences between front-end and back-end development in the context of the MERN stack. Highlight how ReactJS and Node.js contribute to this process. (CO-4)
- c. Analyze the role of Node.js in handling server-side operations and discuss its advantages over traditional server-side languages. (CO-4)