

Enrolment Number										
------------------	--	--	--	--	--	--	--	--	--	--

Total No. of printed pages = 03

Monsoon, 2023
MCA Semester Examinations
WEB TECHNOLOGY
Course Code: MCA23504T

Full Marks – 60

Time – 2½ hours

The figure in the margin indicates full marks for the questions.

Part A

(Answer ALL questions)

1 Choose the appropriate answer

1×10=10

- i) MongoDB stores documents in
 - a. Store
 - b. Collections
 - c. Indexes
 - d. None of the mentioned above
- ii) Which of the following is used for executing Server Side JavaScript ?
 - a. Apache Web Server
 - b. Node JS Server
 - c. IIS Server
 - d. None of the above
- iii) React JS is a
 - a. Server side framework
 - b. User interface framework
 - c. Both a and b
 - d. None of the above
- iv) Which of the following is used to create index on the value stored in an array?
 - a. Single Key Index
 - b. Multi Key Index
 - c. Compound Index
 - d. None of the above
- v) \$lookup operator in MongoDB is used to perform
 - a. Right Outer Join between collection
 - b. Left Outer Join between collection
 - c. Natural Join between collection
 - d. None of the above

- vi) Which of the following feature is used to store values of a React Component
 - a. React State
 - b. React Hook
 - c. Both a and b
 - d. None of the above
- vii) Which of the following is not a PhP super global variable
 - a. \$_ENV
 - b. \$_SERVER
 - c. \$_REQUEST
 - d. None of the above
- viii) Which of the following is an example of a potential XSS vector?
 - a.
 - b. SELECT * FROM users;
 - c. if (userInput) { alert('XSS'); }
 - d. https://example.com/page?input=<script>alert('XSS');</script>
- ix) What is the purpose of the viewport meta tag in HTML?
 - a. To define the content of the webpage
 - b. To set the background color of the webpage
 - c. To specify the viewport settings for responsive web design
 - d. To create links between webpages.
- x) In MongoDB Aggregation, what is the purpose of the \$limit stage?
 - a. To skip a specified number of documents in the pipeline
 - b. To limit the number of documents passed to the next stage
 - c. To limit the size of the MongoDB database
 - d. To limit the number of fields in the output documents

Part B

(Answer ANY FOUR questions- Word Limit:100)

- | | |
|----------|--|
| 2 | <ul style="list-style-type: none">i) Define single page web application? What are the salient features of a single page web application? 5ii) What is session? Explain how session management is done in PhP. 5iii) What is responsive web page? What are the different HTML elements used to design such web page? 5iv) What is Node Js? What is the primary advantage of using Node.js for building real-time applications over other server side languages 5v) Explain the purpose of the action and method attributes in an HTML form. 5vi) What is MERN stack in Web development? Explain in details 5vii) What is callback function in Node JS? Explain how it is implemented. 5 |
|----------|--|

Part C

(Answer ANY TWO questions- Word Limit:100)

- | | | | |
|----------|----|---|----------|
| 3 | a) | What is Component in React? Explain how a functional component is created in React. | 5 |
| | b) | What is indexing? What are the different types of indexes allowed in MongoDB? Explain with example | 5 |
| 4 | a) | Write a Node Js script to read a file and display its content in the browser. | 5 |
| | b) | Write a regular expression in JavaScript to checks for the following criteria of a password:

1. At least 8 characters long
2. Contains at least one uppercase letter
3. Contains at least one lowercase letter
4. Contains at least one digit
5. Contains at least one special character | 5 |
| 5 | a) | Consider a MongoDB collection ORDER that contain the orders placed by customers. Write a MapReduce program in MongoDB to find the total sales amount for each customer for a specific month and year. | 5 |
| | b) | What is Sql Injection attack? Explain how we can prevent Sql Injection in Web Application | 5 |

Part D

(Answer ANY TWO questions- Word Limit:100)

- | | |
|--|---------------|
| 6. Write Short Notes (Any two) (Word limit:100) | 2x5=10 |
| a. NoSql Database | |
| b. REPL Terminal | |
| c. Aggregation in MongoDB | |
| d. OWASP | |