

## Student Result

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**Exam:** MERN STACK

**Score:** 47.0/47.0

**Percentage:** 100.00%

### Question-wise Summary

| Sr.no | Question                                                          | Selected Answer                                              | Correct Answer                                               |
|-------|-------------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|
| 1     | What is the primary purpose of the useState hook in React?        | To manage local component state                              | To manage local component state                              |
| 2     | When does a useEffect hook with an empty dependency array [] run? | Only once after the initial mount                            | Only once after the initial mount                            |
| 3     | Why does React use a Virtual DOM?                                 | To optimize UI updates by minimizing direct DOM manipulation | To optimize UI updates by minimizing direct DOM manipulation |

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|---|-----------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|
| 4 | How are lifecycle events handled in functional components?            | <b>Using Hooks (e.g., useEffect)</b>                            | <b>Using Hooks (e.g., useEffect)</b>                            |
| 5 | In Redux, what is the role of a "Reducer"?                            | <b>To update state based on actions as a pure function</b>      | <b>To update state based on actions as a pure function</b>      |
| 6 | What is the best way to pass data from a child component to a parent? | <b>Using Callback functions as props</b>                        | <b>Using Callback functions as props</b>                        |
| 7 | What is the importance of the key prop when rendering lists in React? | <b>To help React identify which items have changed or moved</b> | <b>To help React identify which items have changed or moved</b> |

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|----|-----------------------------------------------------------------------------------------------------|--------------------------------------------------|--------------------------------------------------|
| 8  | When should you use React.memo?                                                                     | To prevent unnecessary re-renders of a component | To prevent unnecessary re-renders of a component |
| 9  | What problem does the Context API primarily solve?                                                  | Prop Drilling across multiple levels             | Prop Drilling across multiple levels             |
| 10 | Where should static data be defined in a functional component to avoid re-creation on every render? | Outside the component function                   | Outside the component function                   |
| 11 | What does JSX stand for?                                                                            | JavaScript XML                                   | JavaScript XML                                   |
| 12 | In a controlled component, where is the form data handled?                                          | By the component's state                         | By the component's state                         |

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|----|---------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|
| 13 | What is the main benefit of using 'Interfaces' in TypeScript? | <b>Defining the shape/structure of an object</b>                     | <b>Defining the shape/structure of an object</b>                     |
| 14 | What is the purpose of the useParams hook in React Router?    | <b>To access dynamic parameters from the URL</b>                     | <b>To access dynamic parameters from the URL</b>                     |
| 15 | What is a Higher-Order Component (HOC)?                       | <b>A function that takes a component and returns a new component</b> | <b>A function that takes a component and returns a new component</b> |
| 16 | Which JavaScript engine powers Node.js?                       | <b>V8 Engine</b>                                                     | <b>V8 Engine</b>                                                     |
| 17 | What is the primary role of 'Middleware' in Express.js?       | <b>To execute code during the Request/Response cycle</b>             | <b>To execute code during the Request/Response cycle</b>             |

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|----|-----------------------------------------------------------------------------------|--------------------|--------------------|
| 18 | Which HTTP method is typically used to update an existing resource in a REST API? | <b>PUT / PATCH</b> | <b>PUT / PATCH</b> |
| 19 | Which Node.js module is used for handling file system operations?                 | <b>fs</b>          | <b>fs</b>          |
| 20 | How many parts does a JSON Web Token (JWT) consist of?                            | <b>3</b>           | <b>3</b>           |
| 21 | How do you define a dynamic path parameter in an Express route?                   | <b>/user/:id</b>   | <b>/user/:id</b>   |

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| 22 | How can you handle asynchronous operations in Node.js?         | <b>Using Callbacks, Promises, or Async/Await</b>   | <b>Using Callbacks, Promises, or Async/Await</b>   |
| 23 | Which middleware is used to parse JSON bodies in Express 4.x+? | <b>express.json()</b>                              | <b>express.json()</b>                              |
| 24 | What is the main purpose of the Node.js Event Loop?            | <b>To handle non-blocking I/O operations</b>       | <b>To handle non-blocking I/O operations</b>       |
| 25 | Why is module.exports used in Node.js?                         | <b>To share functions or objects between files</b> | <b>To share functions or objects between files</b> |
| 26 | Is Node.js fundamentally single-threaded?                      | <b>Yes</b>                                         | <b>Yes</b>                                         |

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|----|---------------------------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|
| 27 | How many arguments does an Express global error-handling middleware take? | <b>4 (err, req, res, next)</b>                       | <b>4 (err, req, res, next)</b>                       |
| 28 | What does CORS stand for?                                                 | <b>Cross-Origin Resource Sharing</b>                 | <b>Cross-Origin Resource Sharing</b>                 |
| 29 | What happens when you run npm install --save-dev?                         | <b>It installs a dependency for development only</b> | <b>It installs a dependency for development only</b> |
| 30 | What is the use of process.env in a Node.js application?                  | <b>To access environment variables</b>               | <b>To access environment variables</b>               |
| 31 | What type of database is MongoDB?                                         | <b>NoSQL (Document-oriented)</b>                     | <b>NoSQL (Document-oriented)</b>                     |

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|----|--------------------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------|
| 32 | In MongoDB, what is a single record called?                              | <b>Document</b>                                             | <b>Document</b>                                             |
| 33 | What is the purpose of a 'Schema' in Mongoose?                           | <b>To define the structure of documents in a collection</b> | <b>To define the structure of documents in a collection</b> |
| 34 | Which operator is used to update a specific field in a MongoDB document? | <b>\$set</b>                                                | <b>\$set</b>                                                |
| 35 | What is the role of \$match in a MongoDB Aggregation Pipeline?           | <b>To filter documents based on a condition</b>             | <b>To filter documents based on a condition</b>             |
| 36 | What is the default port for a MongoDB server?                           | <b>27017</b>                                                | <b>27017</b>                                                |



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| 37 | Why is the populate() method used in Mongoose?               | To replace IDs with actual documents from other collections | To replace IDs with actual documents from other collections |
| 38 | A 'Collection' in MongoDB is equivalent to what in SQL?      | Table                                                       | Table                                                       |
| 39 | What is the primary benefit of Database Indexing?            | To improve query performance speed                          | To improve query performance speed                          |
| 40 | Is the _id field in a MongoDB document immutable by default? | Yes                                                         | Yes                                                         |
| 41 | What is the output of typeof null in JavaScript?             | "object"                                                    | "object"                                                    |

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|----|--------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|
| 42 | What is a "Closure" in JavaScript?               | <b>A function bundled with its lexical environment</b> | <b>A function bundled with its lexical environment</b> |
| 43 | What does the Array .map() method return?        | <b>A new array with transformed elements</b>           | <b>A new array with transformed elements</b>           |
| 44 | What is 'Hoisting' in JavaScript?                | <b>Moving declarations to the top of their scope</b>   | <b>Moving declarations to the top of their scope</b>   |
| 45 | What does Promise.all() reject?                  | <b>As soon as any one promise rejects</b>              | <b>As soon as any one promise rejects</b>              |
| 46 | Which symbol represents the ES6 Spread operator? | <b>...</b>                                             | <b>...</b>                                             |
| 47 | Which symbol represents the ES6 Spread operator? | <b>...</b>                                             | <b>...</b>                                             |