

- 1) Context API in React:
 - a. Provides a way to pass data through the component tree without having to pass props down manually at every level
 - b. Is an alternative to Redux
 - c. Both A and B
 - d. Neither A nor B
- 2) Node.js was created by:
 - a. Facebook
 - b. Google
 - c. Ryan Dahl
 - d. Brendan Eich
- 3) React was developed by:
 - a. Facebook
 - b. Google
 - c. Microsoft
 - d. Apple
- 4) The 'npm' in 'npm install' stands for:
 - a. Node Package Modulator
 - b. Node Package Manager
 - c. Node Protocol Module
 - d. None of the above
- 5) In MongoDB, which of the following can be used to achieve atomic transactions?
 - a. Indexing
 - b. Two-phase commits
 - c. Sharding
 - d. None of the above
- 6) The primary purpose of the Redux library in a React application is:
 - a. To add style to the components
 - b. To handle routing
 - c. To manage the state of the application
 - d. None of the above
- 7) The Event Loop in Node.js:
 - a. Is a mechanism that allows Node.js to perform non-blocking I/O operations
 - b. Is a loop that continuously checks for new events
 - c. Is responsible for creating new threads
 - d. None of the above
- 8) The 'useEffect' hook in React is primarily used for:
 - a. State management
 - b. Side effects in a component
 - c. Error handling
 - d. None of the above
- 9) Which of the following is a benefit of using MongoDB?
 - a. Strictly structured data
 - b. Schema-less, document-oriented data model
 - c. Relational data with foreign keys

- d. d) None of the above
- 10) Which of the following is a core feature of Node.js?
- a. Multithreaded programming
 - b. Asynchronous and event-driven architecture
 - c. Strictly synchronous execution
 - d. None of the above
- 11) When dealing with state in React, the method used to update the state object is:
- a. setState()
 - b. updateState()
 - c. changeState()
 - d. Either a or b
- 12) In MongoDB, Indexing is used to:
- a. Encrypt the data
 - b. Enhance the performance of search operations
 - c. Compress the data
 - d. None of the above
- 13) The term 'Middleware' in Express.js refers to:
- a. A type of database
 - b. Functions that have access to the request and response objects, and the next middleware function in the application's request-response cycle
 - c. A type of front-end framework
 - d. None of the above
- 14) Stateless components in React:
- a. Can hold and manage local state
 - b. Do not hold or manage local state
 - c. Can hold but not manage local state
 - d. None of the above
- 15) In MongoDB, a Document is:
- a. A single record in a collection
 - b. Equivalent to a row in relational databases
 - c. Both A and B
 - d. Neither A nor B
- 16) The 'Express' in MERN stack is used for:
- a. Building the serverside applications
 - b. Building the client-side applications
 - c. Data Storage
 - d. None of the above
- 17) The 'Virtual DOM' in React is:
- a. A lightweight copy of the actual DOM with the same properties
 - b. A physical representation of the DOM
 - c. An exact copy of the actual DOM
 - d. None of the above
- 18) Which of the following is a fundamental concept in Node.js?
- a. Event-driven programming
 - b. Non-blocking I/O

- c. Both A and B
 - d. Neither A nor B
- 19) The 'useState' hook in React is used for:
- a. Only getting the current state value
 - b. Declaring the state in a function component
 - c. Modifying the DOM directly
 - d. None of the above
- 20) When handling HTTP requests in Express.js, middleware functions can:
- a. Execute any code
 - b. Make changes to the request and response objects
 - c. End the request-response cycle
 - d. All of the above
- 21) In MongoDB, what is the primary purpose of having a schema?
- a. To define the structure of documents within a collection
 - b. To define relationships between documents
 - c. To define the primary key of a document
 - d. None of the above
- This should provide you with a well-rounded set of questions covering a variety of topics within the MERN stack.

1. What is React?

- a) A programming language
- b) A JavaScript library for building user interfaces
- c) A database management system
- d) An operating system

2. What is JSX in React?

- a) JavaScript Extension
- b) JavaScript XML
- c) JavaScript Syntax Extension
- d) JavaScript XSL

3. In React, which method is called when a component is first created?

- a) componentDidMount
- b) componentDidUpdate
- c) componentWillMount
- d) componentWillRender

4. What is the purpose of the render method in a React component?

- a) To update the component's state
- b) To define the component's initial state
- c) To return the JSX that represents the component's UI
- d) To handle user interactions

5. Which of the following is true about props in React?

- a) Props are used for storing component's internal state.

- b) Props are immutable.
 - c) Props can only be used in class components.
 - d) Props are declared using the state keyword.
6. What is the key difference between props and state in React?
- a) Props are mutable, while state is immutable.
 - b) Props are used for passing data from parent to child components, while state is used for managing a component's own data.
 - c) State is passed from parent to child components, while props are used for managing a component's own data.
 - d) Props are used for internal component logic, while state is used for rendering data.
7. How can you update the state of a component in React?
- a) By directly modifying the state object
 - b) By using the `setState` method
 - c) By using the `this.state` property
 - d) By using the props object
8. What is the purpose of the `useState` hook in React?
- a) To define a component's initial state
 - b) To update the component's props
 - c) To create a new component
 - d) To manage state in functional components
9. In React, what is the virtual DOM used for?
- a) To render components on the server
 - b) To optimize database queries
 - c) To improve performance by minimizing direct manipulation of the actual DOM
 - d) To store component state
10. What is a controlled component in React?
- a) A component that doesn't have any state
 - b) A component that has direct access to the DOM
 - c) A component that relies on React to handle its state
 - d) A component that is rendered conditionally
11. How can you pass data from a child component to a parent component in React?
- a) By using the `this.props` object
 - b) By using the `useState` hook
 - c) By using a callback function passed as a prop
 - d) By using the `componentDidUpdate` method
12. What is the purpose of the `map` function when rendering a list of items in React?
- a) To filter the list based on a condition
 - b) To create a new array of JSX elements

- c) To remove items from the list
- d) To update the state of each item in the list

13. How can you conditionally render components in React?

- a) By using the if statement in the JSX code
- b) By using the renderIf method
- c) By using the ternary operator (condition ? component1 : component2)
- d) By using the for loop

14. What is the purpose of the key prop when rendering a list of items in React?

- a) It is used to set the background color of each item.
- b) It is used to uniquely identify each item in the list, helping React efficiently update the DOM.
- c) It is used to apply styles to each item.
- d) It is used to define the order of items in the list.

15. How can you prevent a component from re-rendering in React?

- a) By using the shouldComponentUpdate lifecycle method
- b) By using the render method
- c) By setting the rendered prop to false
- d) By using the useEffect hook

16. What is the purpose of the componentWillUnmount lifecycle method in React?

- a) To initialize the component's state
- b) To update the component's state
- c) To perform cleanup tasks before the component is removed from the DOM
- d) To render the component

17. How can you fetch data from an API in a React component?

- a) By using the fetch method
- b) By using the useFetch hook
- c) By using the componentDidMount method
- d) By using the setState method

18. What is Redux used for in a React application?

- a) To manage routing
- b) To manage component rendering
- c) To manage state in a predictable and centralized manner
- d) To create animations

19. What is a reducer in Redux?

- a) A function that updates the state based on an action
- b) A component that renders data
- c) A function that fetches data from an API
- d) A method for handling routing in a Redux application

20. What is the purpose of the connect function in Redux?

- a) To define the initial state of a Redux store
- b) To connect a React component to the Redux store and access its state
- c) To create a new Redux store
- d) To define action creators

21. What is a React Router used for?

- a) To manage component state
- b) To create animations
- c) To handle routing and navigation in a React application
- d) To fetch data from an API

22. How can you pass data between different routes using React Router?

- a) By using the props object
- b) By using the state object
- c) By using the Link component
- d) By using the connect function

23. What is the purpose of the useEffect hook in React?

- a) To define the initial state of a component
- b) To handle user interactions
- c) To perform side effects in functional components
- d) To create animations

24. In React, how can you create a reusable component that wraps other components and adds functionality?

- a) By using the class keyword
- b) By using the render method
- c) By using the extends keyword
- d) By using higher-order components (HOCs)

25. What is the purpose of the context API in React?

- a) To manage routing in a React application
- b) To provide a way to pass data through the component tree without having to pass props manually at every level
- c) To create animations
- d) To define the initial state of a component

26. How can you style a React component using CSS?

- a) By

directly adding CSS code within the component file

- b) By using the style prop in JSX
- c) By importing external CSS files into the component

d) By using the CSS component provided by React

27. What is a functional component in React?

- a) A component that cannot have state
- b) A component that is defined using a class
- c) A component that is defined using a function
- d) A component that can only be used for rendering UI

28. How can you pass data from a parent component to a child component in React?

- a) By using the setState method
- b) By using the this.props object
- c) By using the useEffect hook
- d) By using the connect function

29. What is the purpose of the shouldComponentUpdate method in React?

- a) To update the component's state
- b) To determine whether a component should re-render
- c) To render the component's children
- d) To handle user interactions

30. What is a functional prop in React?

- a) A prop that is passed as an argument to a function
- b) A prop that is defined using the function keyword
- c) A prop that cannot be changed
- d) A prop that is passed as an object

31. What is a ref in React?

- a) A reference to a component's parent
- b) A reference to a DOM element
- c) A reference to a component's state
- d) A reference to a component's props

32. How can you create a controlled input element in React?

- a) By using the defaultValue attribute
- b) By using the value prop and an onChange handler
- c) By using the ref attribute
- d) By using the controlled prop

33. What is the purpose of the useReducer hook in React?

- a) To manage component state
- b) To perform animations
- c) To manage complex state logic in functional components
- d) To create higher-order components (HOCs)

34. What is the purpose of the memo function in React?
- a) To create animations
 - b) To memoize the result of a function and avoid unnecessary re-renders
 - c) To define the initial state of a component
 - d) To handle routing in a React application
35. How can you pass data between sibling components in React?
- a) By using the props object
 - b) By using the context API
 - c) By using the state object
 - d) By using the connect function
36. What is the purpose of the useContext hook in React?
- a) To define the initial state of a component
 - b) To manage component rendering
 - c) To access the value of a context provider from within a functional component
 - d) To create animations
37. What is the purpose of the children prop in React?
- a) To define the initial state of a component
 - b) To pass data from a parent component to a child component
 - c) To access the child components of a component
 - d) To create animations
38. What is the significance of the key prop when rendering a list of elements in React?
- a) It determines the order in which elements are displayed.
 - b) It is used to uniquely identify each element and optimize rendering.
 - c) It adds a CSS class to each element.
 - d) It controls the animation of elements.
39. In React, what is the purpose of the dangerouslySetInnerHTML prop?
- a) To set the background color of an element
 - b) To inject raw HTML into a component
 - c) To update the component's state
 - d) To define the initial state of a component
40. What is the purpose of the componentDidUpdate lifecycle method in React?
- a) To initialize the component's state
 - b) To perform side effects after a component has updated
 - c) To render the component
 - d) To determine if a component should re-render

41. How can you prevent a component from rendering until certain conditions are met in React?

- a) By using the componentWillMount method
- b) By using the useEffect hook with appropriate dependencies
- c) By using the shouldComponentUpdate method
- d) By using the componentDidUpdate method

42. What is the purpose of the render method in a class component in React?

- a) To return the JSX that represents the component's UI
- b) To update the component's state
- c) To define the initial state of the component
- d) To perform side effects

43. What is Redux Thunk used for in a Redux application?

- a) To manage component rendering
- b) To create animations
- c) To handle asynchronous actions in Redux
- d) To define the initial state of a Redux store

44. What is the purpose of the useMemo hook in React?

- a) To create a new component
- b) To memoize the result of a function and avoid unnecessary re-computation
- c) To manage component state
- d) To handle routing in a React application

45. What is the significance of the exact prop in a Route component in React Router?

- a) It ensures that the component is rendered exactly once.
- b) It specifies the exact URL path that should match the route.
- c) It controls the animation of the route transition.
- d) It defines the route's priority.