React JS

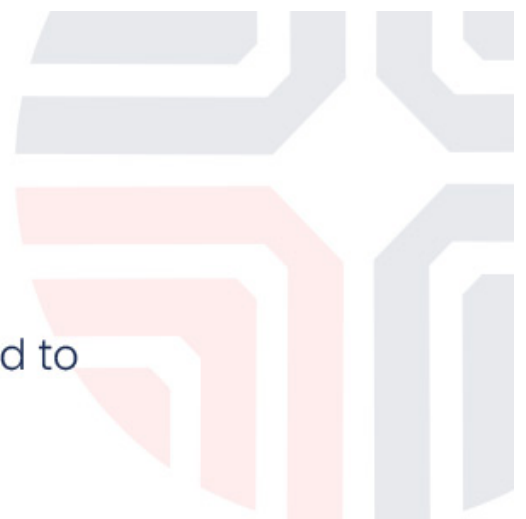## CERTIFICATE OF ACHIEVEMENT

This certificate is proudly presented to

Sisipho Kanana

> For: **React JS**

> With a score of: **28/50 (56%)**

> Date: **October 11, 2024**

CAPACITI

Report Summary

Name	:	**Sisipho Kanana**
Your Score	:	28 out of 50 (56%)
Correct Answers	:	28 Questions
Incorrect Answers	:	22 Questions
Unanswered	:	0 Questions
Required Passing Grade (%)	:	50%
Time Taken	:	14 mins 15 secs
Date	:	Oct 11, 2024
Your Result	:	Pass
Email	:	mavangosisipho@gmail.com

Your Answers

Correct

Q1)   What is React.js?
  A.   A front-end JavaScript library for building user interfaces (Your Answer)(Correct)
  B.   A back-end JavaScript framework for server-side development
  C.   An operating system for mobile devices
  D.   A database management system
         Explanation:React.js is a front-end JavaScript library developed by Facebook for building user interfaces.

Correct

Q2)   Which of the following is true about React.js?
  A.   It uses a virtual DOM for better performance (Your Answer)(Correct)
  B.   It is primarily used for database management
  C.   It is not compatible with HTML and CSS
  D.   It can only be used for back-end development
         Explanation:React.js uses a virtual DOM (Document Object Model) for better performance by minimizing direct manipulation of the actual DOM.

Correct

Q3)   What does JSX stand for in React.js?
  A.   JavaScript XML (Your Answer)(Correct)
  B.   JavaScript Extension
  C.   Java Standard Extensions
  D.   Java XML Syntax
         Explanation:JSX stands for JavaScript XML, which allows developers to write HTML inside JavaScript code in React.js.

Incorrect

Q4)   Which component lifecycle method is used for component initialization in

React.js?

A.   componentDidMount() (Correct)

B.   componentDidUpdate()

C.   componentWillUnmount()

D.   render() (Your Answer)(Incorrect)

Explanation:The componentDidMount() method is used for component initialization in React.js, which runs after the component has been mounted to the DOM.

Incorrect

Q5)   4. React JS was developed by Facebook.

A.   True (Correct)

B.   False (Your Answer)(Incorrect)

Explanation:React JS was created by Jordan Walke, a software engineer at Facebook.

Correct

Q6)   What is the package manager used in React.js?

A.   npm (Node Package Manager) (Your Answer)(Correct)

B.   pip (Python Package Installer)

C.   composer

D.   yarn

Explanation:npm (Node Package Manager) is the package manager commonly used in React.js for installing and managing dependencies.

Correct

Q7)   Which of the following is a core feature of React.js?

A.   Component-based architecture (Your Answer)(Correct)

B.   Object-oriented programming

C.   Sequential programming

D.   Procedural programming

Explanation:React.js is known for its component-based architecture, where UI is broken down into reusable components.

Correct

Q8) 2. React JS can only be used for building web applications.

A. True

B. False (Your Answer)(Correct)

Explanation:React JS can be used for developing web, mobile, and desktop applications.

Correct

Q9) What is the entry point of a React.js application?

A. index.js (Your Answer)(Correct)

B. main.js

C. app.js

D. react.js

Explanation:The entry point of a React.js application is usually the index.js file where the ReactDOM.render() method is called to render the root component.

Correct

Q10) 3. React JS uses HTML to define the user interface.

A. True

B. False (Your Answer)(Correct)

Explanation:React JS uses JSX, which is a syntax extension for JavaScript.

Correct

Q11) 1. React JS is a programming language.

A. True

B. False (Your Answer)(Correct)

Explanation:React JS is a JavaScript library for building user interfaces.

Correct

Q12) What tool can be used for managing state in React.js?

A. Redux (Your Answer)(Correct)

B. MongoDB

C. MySQL

D.   PostgreSQL

Explanation:Redux is a popular tool used for managing state in React.js applications, providing a centralized store for state management.

Correct

Q13) Which of the following is a common way to style React.js components?

A.   CSS (Cascading Style Sheets) (Your Answer)(Correct)

B.   Java

C.   HTML (Hypertext Markup Language)

D.   Python

Explanation:CSS (Cascading Style Sheets) is commonly used to style React.js components, either through inline styles, separate CSS files, or CSS-in-JS libraries.

Correct

Q14) What is the purpose of props in React.js?

A.   To pass data from parent to child components (Your Answer)(Correct)

B.   To write CSS styles for components

C.   To manage state within a component

D.   To perform server-side operations

Explanation:Props in React.js are used to pass data from parent to child components, allowing for dynamic content and reusability of components.

Incorrect

Q15) How can you optimize performance in React.js?

A.   Using keys for lists (Correct)

B.   Nesting components deeply

C.   Not using memoization (Your Answer)(Incorrect)

D.   Inline all styles in components

Explanation:Using keys for lists is a way to optimize performance in React.js by helping React identify which items have changed, been added, or been removed.

Correct

Q16) What is the purpose of react-router in React.js?

A. To handle routing and navigation in a React application (Your Answer)(Correct)

B. To manage database queries

C. To handle server-side rendering

D. To set up authentication and authorization

Explanation:react-router is used in React.js for handling routing and navigation, allowing for creating multiple pages or views in a single-page application.

Correct

Q17) What is the recommended way to update state in React.js components?

A. Using setState() method (Your Answer)(Correct)

B. Directly modifying state object

C. Using global variables

D. Using callbacks

Explanation:The recommended way to update state in React.js components is by using the setState() method provided by React to safely update component state.

Incorrect

Q18) Which of the following is true about React Hooks?

A. Introduced in React version 16.8 (Correct)

B. Only used for class components (Your Answer)(Incorrect)

C. Not suitable for functional components

D. Require separate installation

Explanation:React Hooks were introduced in React version 16.8 and provide a way to use state and other React features in functional components.

Correct

Q19) What is the main concept behind React.js?

A. Declarative components (Your Answer)(Correct)

B. Imperative programming

C. Functional programming only

D. Procedural approach

Explanation:One of the main concepts behind React.js is declarative components, where developers describe the desired state and React takes care of updating the UI.

Incorrect

Q20) In React.js, what is a higher-order component?

A. A component that takes another component as an argument (Correct)

B. A component that is rendered at a higher level in the component tree (Your Answer)(Incorrect)

C. A built-in React component

D. A component that handles Ajax requests

Explanation:A higher-order component in React.js is a component that takes another component as an argument and returns a new component with added functionality.

Incorrect

Q21) 5. React JS follows the Model-View-Controller (MVC) architecture.

A. True (Your Answer)(Incorrect)

B. False (Correct)

Explanation:React JS follows a component-based architecture known as the Virtual DOM to manage UI components.

Correct

Q22) What is the role of ReactDOM in React.js?

A. Render components to the DOM (Your Answer)(Correct)

B. Manage state in components

C. Handle HTTP requests

D. Create Redux stores

Explanation:ReactDOM in React.js is used to render components to the DOM, allowing React to manage the UI and handle updates efficiently.

Correct

Q23) What is the significance of useEffect in React Hooks?

A. To perform side effects in functional components (Your Answer)(Correct)

B. To set initial state in function components

C. To create custom hooks

D. To handle form submissions

Explanation:The useEffect hook in React is used to perform side effects in functional components, such as data fetching, subscriptions, or manually changing the DOM.

Correct

Q24) How can you handle forms in React.js?

A. Using controlled components (Your Answer)(Correct)

B. Using global variables

C. Directly manipulating DOM elements

D. Using inline styles

Explanation:Handling forms in React.js can be done using controlled components, where form data is controlled by React components, providing a single source of truth for form input.

Correct

Q25) Which method is used to fetch data from an API in React.js?

A. Using fetch() or axios (Your Answer)(Correct)

B. Using setState()

C. Using useEffect()

D. Using componentDidMount()

Explanation:Data can be fetched from an API in React.js using methods like fetch() or axios within useEffect() or componentDidMount() lifecycle methods.

Correct

Q26) What is React.js?

A. A JavaScript library for building user interfaces (Your Answer)(Correct)

B. A programming language

C. A database management software

D. An operating system

Explanation:React.js is a JavaScript library for building user interfaces.

Correct

Q27) What does JSX stand for in React.js?

A. JavaScript XML (Your Answer)(Correct)

B. JavaScript Extension

C. Java Syntax

D. JSON XML

Explanation:JSX stands for JavaScript XML, which allows the mixing of HTML and JavaScript in React components.

Incorrect

Q28) Which of the following is NOT a core concept of React.js?

A.   Virtual DOM

B.   Component-based architecture

C.   Machine learning (Correct)

D.   Unidirectional data flow (Your Answer)(Incorrect)

Explanation:Machine learning is not a core concept of React.js. The core concepts include Virtual DOM, Component-based architecture, and Unidirectional data flow.

Incorrect

Q29) What is the entry point for a React application?

A.   index.html

B.   main.js

C.   App.js (Your Answer)(Incorrect)

D.   src/index.js (Correct)

Explanation:The entry point for a React application is usually src/index.js, where the ReactDOM.render method is called to render the root component.

Incorrect

Q30) Which of the following is used to manage component state in React.js?

A.   useState hook (Correct)

B.   useEffect hook

C.   map function

D.   setState method (Your Answer)(Incorrect)

Explanation:The useState hook is used to manage component state in React.js functional components.

Correct

Q31) What is the purpose of props in React.js?

A.   To store component state

B.   To pass data from parent to child components (Your Answer)(Correct)

C.   To perform asynchronous operations

D.   To style components

Explanation:Props are used to pass data from parent to child components in React.js applications.

Correct

Q32)   Which lifecycle method is called once the component is mounted on the DOM?

A.   componentDidMount (Your Answer)(Correct)

B.   componentWillMount

C.   componentWillUnmount

D.   render

Explanation:The componentDidMount lifecycle method is called once the component is mounted on the DOM in React.js.

Incorrect

Q33)   Which tool can be used for debugging React applications?

A.   React Debugger (Your Answer)(Incorrect)

B.   Redux

C.   Chrome DevTools (Correct)

D.   Angular CLI

Explanation:Chrome DevTools can be used for debugging React applications by inspecting components, viewing state changes, and profiling performance.

Incorrect

Q34)   What is a higher order component in React.js?

A.   A component that is rendered in the header of the page

B.   A function that takes a component and returns a new component (Correct)

C.   A component with higher performance (Your Answer)(Incorrect)

D.   A component with more advanced features

Explanation:A higher order component in React.js is a function that takes a component and returns a new component with additional functionality.

Incorrect

Q35) Which of the following is true about React.js?

A. It is a back-end framework

B. It uses MVC architecture (Your Answer)(Incorrect)

C. It is a front-end framework developed by Google

D. It supports server-side rendering (Correct)

Explanation:React.js supports server-side rendering, allowing faster initial page loads and better SEO performance.

Incorrect

Q36) What is a React component?

	Choice	Correct Answer	Your Responses	
A	A	A class or function that accepts inputs and returns a React element	A CSS framework for styling web applications	Incorrect
B	B	A CSS framework for styling web applications	Unanswered	Missed

Explanation: A React component is a class or function that accepts inputs and returns a React element.

Incorrect

Q37) What does JSX stand for?

	Choice	Correct Answer	Your Responses	
A	A	JavaScript XML	JavaScript XML	Correct
B	B	JavaScript Extension	Unanswered	Missed

Explanation: JSX stands for JavaScript XML.

Correct

Q38) What is the virtual DOM in React?

	Choice	Correct Answer	Your Responses	
A	A	A lightweight version of the DOM	A lightweight version of the DOM	Correct
B	B	A JavaScript representation of the actual DOM	A JavaScript representation of the actual DOM	Correct

Explanation: The virtual DOM is a JavaScript representation of the actual DOM.

Incorrect

Q39) What is the purpose of state in React components?

	Choice	Correct Answer	Your Responses	
A	A	To store persistent data that affects a component's rendering	To define styles for a component	Incorrect
B	B	To define styles for a component	To store persistent data that affects a component's rendering	Incorrect

Explanation: State in React components is used to store persistent data that affects a component's rendering.

Incorrect

Q40) What is React Router used for?

	Choice	Correct Answer	Your Responses	
A	A	Managing state in React components	Handling routing in React applications	Incorrect
B	B	Handling routing in	Managing state in React	Incorrect

		React applications	components	

Explanation: React Router is used for handling routing in React applications.

Incorrect

Q41) What is a prop in React?

	Choice	Correct Answer	Your Responses	
A	A	A special keyword used to create React components	An object passed into a component as a parameter	Incorrect
B	B	An object passed into a component as a parameter	Unanswered	Missed

Explanation: A prop in React is an object passed into a component as a parameter.

Incorrect

Q42) What is the purpose of componentDidMount() in React?

	Choice	Correct Answer	Your Responses	
A	A	To update the component's state	To perform actions after the component is mounted	Incorrect
B	B	To perform actions after the component is mounted	To update the component's state	Incorrect

Explanation: componentDidMount() in React is used to perform actions after the component is mounted.

Incorrect

Q43) What is a higher-order component in React?

	Choice	Correct Answer	Your Responses	
A	A	A component rendered at the top of the DOM tree	A component rendered at the top of the DOM tree	Correct
B	B	A pattern where a function takes a component and returns a new component	Unanswered	Missed

Explanation: A higher-order component in React is a pattern where a function takes a component and returns a new component.

Correct

Q44) What is the purpose of keys in React lists?

	Choice	Correct Answer	Your Responses	
A	A	To uniquely identify list items in React components	To uniquely identify list items in React components	Correct
B	B	To define CSS classes for list items	To define CSS classes for list items	Correct

Explanation: Keys in React lists are used to uniquely identify list items in React components.

Correct

Q45) What is the purpose of shouldComponentUpdate() in React?

	Choice	Correct Answer	Your Responses	
A	A	To check if a component should be updated before re-rendering	To check if a component should be updated before re-rendering	Correct

B	B	To change the state of a component	To change the state of a component	Correct

Explanation:
shouldComponentUpdate() in React is used to check if a component should be updated before re-rendering.

Correct

Q46) What is the role of componentDidUpdate() in React?

	Choice	Correct Answer	Your Responses	
A	A	To perform actions before the component is updated	To perform actions before the component is updated	Correct
B	B	To perform actions after the component is updated	To perform actions after the component is updated	Correct

Explanation:
componentDidUpdate() in React is used to perform actions after the component is updated.

Incorrect

Q47) What is React Context used for?

	Choice	Correct Answer	Your Responses	
A	A	To pass data through the component tree without having to pass props down manually	To pass data through the component tree without having to pass props down manually	Correct
B	B	To define global styles for a React application	Unanswered	Missed

Explanation: React Context is used to pass data through the component

tree without having to pass props down manually.

Correct

Q48) What is the purpose of React hooks?

	Choice	Correct Answer	Your Responses	
A	A	To add external libraries to a React application	To add external libraries to a React application	Correct
B	B	To add state and other React features to functional components	To add state and other React features to functional components	Correct

Explanation: React hooks are used to add state and other React features to functional components.

Incorrect

Q49) What is the role of setState() in React?

	Choice	Correct Answer	Your Responses	
A	A	To update the component's props	To update the component's state and trigger a re-render	Incorrect
B	B	To update the component's state and trigger a re-render	Unanswered	Missed

Explanation: setState() in React is used to update the component's state and trigger a re-render.

Incorrect

Q50) What is the significance of the render method in React components?

	Choice	Correct Answer	Your Responses	
A	A	To define the initial state of a component	To define the initial state of a component	Correct
B	B	To describe what the UI should look like	Unanswered	Missed

Explanation: The render method in React components is used to describe what the UI should look like.