

Question based on Lec 6 – REACT

Single Answer

1. What is the primary purpose of React's Virtual DOM?
 - a) To replace the real DOM completely
 - b) To optimize performance by updating only changed elements
 - c) To store application data persistently
 - d) To handle server-side rendering
2. Which React Hook should you use to manage complex state logic in functional components?
 - a) useState
 - b) useEffect
 - c) useReducer
 - d) useContext
3. What is the difference between Props and State in React?
 - a) Props are mutable, while State is immutable.
 - b) Props are used to pass data between components, while State manages local data within a component.
 - c) Props are used for styling, while State is used for logic.
 - d) Props and State are interchangeable in functional components.
4. Which bundling tool is designed for minimal configuration and faster build times?
 - a) Webpack
 - b) Parcel
 - c) Babel
 - d) Vite
5. What does tree shaking accomplish in bundling tools like Webpack and Vite?
 - a) Combines multiple files into one bundle
 - b) Removes unused code during bundling to reduce file size
 - c) Splits code into smaller chunks for better performance
 - d) Optimizes CSS files for faster rendering
6. What does the getDerivedStateFromProps() lifecycle method do in React class components?
 - a) Initializes state before rendering a component for the first time.
 - b) Updates state based on changes in props before rendering.
 - c) Cleans up resources before unmounting a component.
 - d) Captures information about the DOM before it changes.
7. Which of the following describes JSX correctly?
 - a) A JavaScript compiler that transforms ES6 syntax into ES5 syntax.
 - b) A syntax extension that allows writing HTML/XML-like code within JavaScript.
 - c) A CSS preprocessor used for styling React components.
 - d) A library for managing state in React applications.
8. What is the main advantage of using Context API in React?
 - a) Simplifies passing props through deeply nested components without prop drilling.

- b) Provides built-in support for managing global state across unrelated components.
 - c) Improves performance by reducing re-renders of child components.
 - d) Allows direct manipulation of the DOM without using Virtual DOM.
9. Which lifecycle method is called immediately after a component is updated and re-rendered?
- a) componentDidMount()
 - b) componentWillUnmount()
 - c) **componentDidUpdate()**
 - d) shouldComponentUpdate()
10. What does "lifting state up" mean in React?
- a) **Moving state from child components to parent components for shared access**
 - b) Removing state entirely from components
 - c) Storing state globally across all components
 - d) Using external libraries to manage state

Multiple Answer

11. Which features make JSX powerful in React development? (Select two correct answers.)
- a) **Embedding JavaScript expressions directly into HTML-like syntax**
 - b) **Preventing cross-site scripting attacks by converting expressions to strings**
 - c) Automatically updating state variables when props change
 - d) Providing built-in support for database queries
12. Which tools can be used for bundling web applications? (Select three correct answers.)
- a) **Webpack**
 - b) **Parcel**
 - c) Babel
 - d) **Vite**
13. Which React Hooks are commonly used in functional components? (Select three correct answers.)
- a) **useState**
 - b) **useEffect**
 - c) **useContext**
 - d) useSnapshot
14. What are advantages of using React Hooks over class components? (Select three correct answers.)
- a) **Simplifies state management in functional components**
 - b) **Eliminates lifecycle methods explicitly by combining them into Hooks like useEffect**
 - c) **Improves performance by reducing re-renders caused by unnecessary updates**
 - d) Provides built-in support for server-side rendering
15. Which features differentiate Webpack from Parcel and Vite? (Select two correct answers.)
- a) **Highly configurable but complex setup**
 - b) Minimal configuration required
 - c) **Large plugin ecosystem**
 - d) Faster build time for small projects

Fill in the Blanks

16. react is an architectural style for building user interfaces that emphasizes reusable and nestable components.
17. The virtual DOM optimizes performance by updating only changed elements instead of re-rendering the entire page.
18. In JSX, event handlers are specified as attributes prefixed with _____ followed by camelCase event names.
19. The useEffect Hook allows you to perform side effects like fetching data or updating the DOM after rendering.
20. Bundling tools like Webpack, Parcel, and Vite reduce http request by combining multiple files into one.