Basic Theory (1–10)

1. What is React.js and who developed it?  
React.js is a JavaScript library for building user interfaces, especially single-page applications.It was developed by Facebook in 2013.

2. Difference between a React component and a regular JavaScript function.

A React component returns JSX and is used to render UI in React applications.

A regular JavaScript function can perform any logic but does not directly return JSX for rendering.

3. What is JSX and why is it used in React?  
JSX (JavaScript XML) is a syntax extension that allows you to write HTML-like code inside JavaScript.  
It makes UI code more readable and allows embedding JavaScript expressions inside {}.

4. Difference between a functional component and a class component in React

Functional Component: Simple JavaScript function, uses hooks like useState and useEffect.

Class Component: ES6 class, uses lifecycle methods like componentDidMount, this.state, etc.

5. Purpose of the return() statement inside a React component  
It specifies what UI (JSX) the component should render on the screen.

6. How to display dynamic data inside JSX?  
Wrap the JavaScript variable or expression inside {} in JSX. Example: <h1>{name}</h1>

7. Difference between props and state in React

Props: Read-only data passed from parent to child components.

State: Internal data of a component that can change over time.

8. Role of useState() in React functional components  
It lets you add state variables to functional components and update them dynamically.

9. Significance of the key attribute in React lists  
key helps React identify which list items changed, improving rendering performance.

10. How to handle events like button clicks in React?  
Pass an event handler function to the element’s onClick (or other event) property. Example:

<button onClick={handleClick}>Click Me</button>