1. What is React, and what is its primary purpose in web development?
2. List three advantages of using React for building web applications.
3. Who developed React, and when was it first released?
4. Describe the adoption of React by the developer community.
5. What are the steps to install React and set up a development environment?
6. Which tools are necessary for creating a new React application?
7. What are props in React, and what role do they play in component interaction?
8. How do you pass and access props in a React component?
9. What are the two main types of components in React?
10. Why are components considered the building blocks of a React application?
11. How are React components rendered to the DOM?
12. What mechanisms cause React components to re-render?
13. What is JSX, and why is it beneficial to use in React applications?
14. How do you create and render a JSX element within a React component?
15. Why is it important to reuse components in a React application?
16. What are the three main phases of a React component's lifecycle?
17. Name and describe two common lifecycle methods available in class-based components.
18. What defines a class-based component in React?
19. List two features unique to class-based components.
20. What defines a function-based component in React?

21. What are hooks, and how do they enhance function-based components?
22. Compare the syntax complexity of class-based and function-based components.
23. How is state managed differently in class-based and function-based components?
24. Which lifecycle methods are available in class-based components, and how are similar functionalities achieved in function-based components?
25. Compare the performance and learning curve of class-based and function-based components.
26. Why are function-based components with hooks preferred in modern React development?