Question: What is React.js? How is it different from other JavaScript frameworks and libraries?

Answer: React JS is a Component based JavaScript Frontend Library used to create Dynamic website.

React JS is different from other JS library or framework as it based on component, virtual DOM and hooks for efficient rendering.

Question: Explain the core principles of React such as the virtual DOM and component- based architecture?

Answer: Virtual DOM is a lightweight copy of the actual DOM and component based architecture means that we divide the UI into small and reusable separate code

Question: What are the advantages of using React.js in web development?

Answer: The advantages of the react JS includes —

1 – Component Based Architecture – where we can create small and reusable code which is easy to manage

2 – Virtual DOM – In which React JS create a copy of the original DOM, which is easy to render and update

3 – JSX (JavaScript XML) – JSX allows us to HTML Like syntax in JavaScript, making it easier to read and debug

Question: What is JSX in React.js? Why is it used?

Answer: JSX combines HTML and JavaScript, which allows us to write HTML like syntax in JavaScript making it easier to maintain

Question: How is JSX different from regular JavaScript? Can you write JavaScript inside JSX?

Answer: JSX is different from regular JavaScript as JSX is the combination of the HTML and JavaScript written together, JSX supports expression not statement, for conditional rendering we have to ternary operator and for looping we have to use map function.

Yes, we can write JavaScript inside the JSX within the curly braces.

Question: Discuss the importance of using curly braces {} in JSX expressions.

Answer: Curly braces in JSX expression is important as it helps us to write JavaScript

Code and evaluate expressions within the curly braces.

Question: What are components in React? Explain the difference between functional components and class components.

Answer: Components are the building blocks of the react application, it is a self-contained reusable piece of code contains its structure, behaviour and styling of its own.

The difference between Functional and Class Component are as follows—

1 – Code in functional component are more simpler and concise than class component

2 – State management will be done with the help of hooks in functional component where as in class component it is done with the help of "this.state" and the lifecycle methods like componentDidMount.

3 – Functional component performs better and easier to debug than class component because of the more simpler and concise code.

4 – Class component uses constructor whereas functional component does not

Question: How do you pass data to a component using props?

Answer: To pass the props, first we have to define it into the parent component and pass it into the child components JSX tag as the attribute, then we have to accept the props in the child component as an argument .

Question: What is the role of render() in class components?

Answer: render() method in class components is lifecycle method responsible for describing what should be displayed on the screen, it returns a react element, which is used to used to build and update the DOM.

Question: What are props in React.js? How are props different from state?

Answer: Props are used to send send data from parent component to the child component we can modify props data in the child component, State in react is used to store data in component that we want to change or modify later, Unlike Props it can be modified within the component itself.

Question: Explain the concept of state in React and how it is used to manage component data.

Answer: State in React is used to store data in the component, which can be managed and changed over time to make the webpage responsive and for the user interaction, when the state of the component changes React re-renders the component to reflects the updated state in the UI.

Question: Why is this.setState() used in class components, and how does it work?

Answer: "this.setState" is used to update the state of a class component, when it changes the state of the component the render() runs and the updated UI will be displayed with the updated state of the component