React.js Interview Questions (2+ Years Experience)

1. What are the differences between controlled and uncontrolled components?

Controlled: React manages form data using useState.

Uncontrolled: DOM manages form data using refs.

Example:

```
// Controlled
<input value={value} onChange={e => setValue(e.target.value)} />


// Uncontrolled
<input ref={inputRef} />
```

2. Explain the useEffect hook and its dependencies.

useEffect runs side effects after rendering.

Dependencies array controls when it re-runs.

Example:

```
useEffect(() => {
  // side effect
}, [dependency]);
```

Pitfalls:

- Omitting dependencies causes stale data

- Adding too many causes infinite loops

3. What is memoization in React?

Memoization helps avoid unnecessary re-renders.

- React.memo: memoizes functional components.

- useMemo: memoizes expensive calculations.

- useCallback: memoizes functions.

4. How do you manage global state?

Options include:

- Context API (lightweight use like theme/auth)

- Redux / Zustand / Jotai / Recoil for complex logic

- React Query / SWR for server state management

5. What is the difference between useState and useReducer?

useState: Simple local state.

useReducer: Complex or related states and more scalable in larger applications.

6. How do you handle performance issues in large React apps?

Tips:

- Code splitting with React.lazy + Suspense

- Debounce expensive functions

- List virtualization with react-window

- Use memo, useMemo, useCallback

- Prevent unnecessary re-renders

7. How do you ensure accessibility (a11y)?

- Use semantic HTML (button, label, etc.)

- Apply aria-* attributes

- Support keyboard navigation

- Use tools like Axe and Lighthouse for audits