JavaScript + React Interview Cheat Sheet

■ JavaScript Questions with Answers

1. var vs let vs const

- var → function-scoped, hoisted, re-declarable.
- let → block-scoped, hoisted but in TDZ.
- const → block-scoped, cannot be reassigned.

2. Hoisting

var is hoisted with undefined, let/const in TDZ.

3. Closures

A function that remembers outer scope variables.

4. Shallow vs Deep Copy

Shallow copies share references; deep copies don't.

5. Higher Order Functions

Functions that take or return other functions.

6. == vs ===

== does coercion, === checks type + value.

7. Event Delegation

Attach event handler to parent, capture events from children.

8. Call / Apply / Bind

Used to set 'this' explicitly.

9. Function Declaration vs Expression

Declarations hoisted fully, expressions not.

10. this Keyword

Depends on context (normal, arrow, object).

11. Event Loop

Microtasks (Promises) before Macrotasks (setTimeout).

12. Promises / Async-Await

Async flow, error handling with try/catch.

13. Debounce & Throttle

Control rate of function execution.

14. Prototype Chain

Objects inherit from prototypes.

■ React Questions with Answers

1. Functional vs Class

Hooks replaced class lifecycle.

2. useState & useEffect

State + side effects in functional components.

3. Props vs State

Props immutable, state mutable.

4. useMemo vs useCallback

useMemo memoizes values, useCallback memoizes functions.

5. React.memo

Prevents unnecessary re-renders.

6. Context API

Pass global state without props drilling.

7. Error Boundaries

Catch UI errors in class components.

8. Lazy Loading

Load components on demand.

9. Cancel API Request

Use AbortController in useEffect cleanup.

10. Infinite Scroll

Detect scroll end, load more items.

■ Scenario Based

- Large list → Virtualization, pagination.
- Global state → Context API, Redux Toolkit, RTK Query.
- Nested JSON → Recursion to render dynamically.
- Bundle size → Lazy load, tree shaking, code splitting.
- Multi-tenant → Config loader, dynamic themes.