**MCQs**:

1. What kind of component import React from 'react' is?

**A. stateless component**

B. stateful component

C. pure component

2. What is used in ReactJs to increase performance

A. Both B and c

B. Original DOM

**C. Virtual DOM**

D. None of the above

3. What is the state in react?

A. A permanent storage

B. **Internal storage of the component**

C. Both A and B

**D.** None of the above

4. How do you handle passing through the component tree without having to pass props down

manually at every level?

A. React Send

B. React Pinpoint

C. React Router

D. **React Context**

5. For controlled components in react

A. Source of truth is DOM

B. Source of truth can be anything

**C.** **Source of truth is component state**

D. None of the above

6. What happens when the following render() method executes?

render(){

let langs = ["Ruby","ES6","Scala"]

return (<div>

{langs.map(it => <p>{it}</p>)}</div>)

}

A. Error. Cannot use direct JavaScript code in JSX

B. Error. Should be replaced with a for..loop for correct output

C. **Displays the list of languages in the array**

D. Displays nothing

7. What will happen when this useEffect hook is executed, assuming name is not already

equal to John?

useEffect(() => {

setName(‘John’);

}, [name]);

A. It will cause an error immediately

B. It will execute the code inside the function, but only after waiting to ensure that no other

component is accessing the name variable

C. **It will update the value of name once and not run again until name is changed from the**

**outside**

D. It will cause an infinite loop.

8. Keys are given to a list of elements in react. These keys should be -

A. Unique in the DOM

B. Do not requires to be unique

C. **Unique among the siblings only**

D. All of the above

9. If a function component should always render the same way given the same props, what is a

simple performance optimization available for it?

A. **Wrap it in the React.memo higher-order component.**

B. Implement the useReducer Hook.

C. Implement the shouldComponentUpdate lifecycle method.

D. Implement the useMemo Hook

10. What happens when you call setState() inside the render() method?

A. Repetitive output appears on the screen

B. **Nothing happens.**

C. Duplicate key error

D. Stack overflow error

**Tasks:**

**Task 1: User List**

Tech stack: ReactJS, styled-components, eslint, redux

Create a CRUD project that fetches users from <https://jsonplaceholder.typicode.com/users>. The crud application will:

- Display each user on a card. Use any details you want from the json (Play with design and create your best, you can take design reference from <https://www.dribble.com>).

- you can use user avatars from <https://avatars.dicebear.com/>

- Ability to create/update and delete a user.

- Application should store all the users in a redux store.

- The code should be clean as per <https://airbnb.io/javascript/react/> style guide (hint: use/configure eslint)

- Use styled-components to build reusable components

- (Optional) You can add middleware to handle side effects.

- (Optional) you can also use typescript

**Task 2: Weather Application**

Tech stack: ReactJS, styled-components, eslint

Create a weather application that uses API from <https://openweathermap.org/> (It consist of a free API key that provides 1,000,000 calls/month).

- Ability for users to search for a city (It can be from any location/country).

- Display weather for searched city.

- Optionally, add a autocomplete dropdown to avoid users entering a wrong city name

- Play with design and create your best, you can take design reference from <https://www.dribble.com>

-The code should be clean as per <https://airbnb.io/javascript/react/> styleguide (hint: use/configure eslint)

- Use styled-components to build reusable components

- (Bonus points) make it responsive

**Task 3: My blog**

Tech stack: ReactJS, styled-components, eslint, react-router

Create a CRUD blog application.

- Ability for users to create an article with fields (Title, Body and Name of the user).

- Show the article card on homepage (with title, minified body, created date and Author’s name)

- If the user clicks on the article card, take the user to the article page with a complete body. Show options to update and delete the article on the article page.

- you can use avatars for author image from <https://avatars.dicebear.com/>

- (Optional) Use redux store

- (Bonus points) make it responsive

- Play with design and create your best, you can take design reference from <https://www.dribble.com>

-The code should be clean as per <https://airbnb.io/javascript/react> styleguide (hint: use/configure eslint)

- Use styled-components to build reusable components

**Task 4: Picgram**

Tech stack: ReactJS, styled-components, eslint, redux

Create an Application that will display images from <https://picsum.photos/v2/list?page=2&limit=100> and give users ability to like and comment (Create, update and delete comments) on the image.

- Store the likes and comments on images in global redux store

- (Bonus points) make it responsive

- Play with design and create your best, you can take design reference from <https://www.dribble.com>

-The code should be clean as per <https://airbnb.io/javascript/react/> styleguide (hint: use/configure eslint)

- Use styled-components to build reusable components