ReactJS Assessment
Feb 6th, 2023

Instructions
1. *Consider the **environment** to be a modern **web browser**.*
2. *This is **not a test of your performance** & will not affect your year ends in any manner.*
3. *This is to test how much of the sessions you were able to grasp & what we, as instructors, can help you further with. So, if you want to run the code snippets on browser for answers, it's your loss.* 😊
4. *Read the questions & the code snippets carefully before answering.*

1. **Select the right option to have the size of the font as 24 pixels in the referred snippet to Question 1.**

```
const AddFontStyle = () => <p style={Q._____}>Add a little style!</p>;
```

   a. {fontSize: 24px}
   b. {fontSize: '24px'}
   c. fontSize: 24px
   d. fontSize: '24px'

2. **What is the children prop?**

   a. A property that lets you pass data to child components.
   b. A property that adds child values to state.
   c. A property that lets you set an object as a property.
   d. A property that lets you nest components in other components.

3. **How can you optimize performance for a function component that always renders the same way?**

   a. Use the useMemo Hook.
   b. Use the useReducer Hook.
   c. Wrap it in the React.memo higher-order component.
   d. Use the shouldComponentUpdate lifecycle method.

4. **What is a common use case for ref?**

   a. To refer to a function
   b. To directly access a DOM node.
   c. To bind the function
   d. To refer to another JavaScript file

5. **React separates the user interface into components. How are components combined to create a user interface?**

   a. By nesting components
   b. With code splitting
   c. By putting them in a folder structure
   d. With webpack

6. **Why should you avoid copying the values of props into a component's state?**
   a. Because prop values cannot be stored in state.
   b. Because you should never mutate state.
   c. Because you want to allow data to flow back up to the parent.
   d. Because that would create two instances of the same state that could become out of sync.

7. **What do you need to add to the second argument of a _useEffect_ Hook to limit it to running only on the first render?**

```
import { useState, useEffect } from "react";
import ReactDOM from "react-dom/client";

function App() {
  const [data, setData] = useState([]);

  useEffect(() => {
    setData({ test: 'React' })
  }, Q._____);

  return <h1> {data.test} </h1>;
}

const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(<App />);
```

   a. [data]
   b. second argument not required.
   c. []
   d. [prop]

8. Add the attribute that allows React to keep track of elements in lists.

```javascript
import ReactDOM from 'react-dom/client';

function GroceryList() {
    const items = [
        {id: 1, name: 'bread'},
        {id: 2, name: 'milk'},
        {id: 3, name: 'eggs'}
    ];

    return (
        <>
            <h1>Grocery List</h1>
            <ul>
                {items.map((item) =>
                    <li Q_____={item.id}>{item.name}</li>)}
            </ul>
        </>
    );
}

const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(<GroceryList />);
```

a. id
b. key
c. index
d. value

9. Complete this expression to include a class attribute the way JSX supports.

```javascript
const title = <h1 Q_____="primary">Hello World!</h1>;
```

a. class
b. style
c. className
d. aria-label

```
import { useState, createContext, Qa_____, useEffect} from "react";
import ReactDOM from "react-dom/client";

const UserContext = createContext();

function Component1() {
  const [user, setUser] = useState("");

  useEffect(() => {
    setUser("John Doe");
  }, []);

  return (
    <Qb_____.Provider Qc_____={user}>
      <h1>{`Hello ${user}!`}</h1>
      <Component2 />
    </ Qb_____.Provider>
  );
}

function Component2() {
  return <Component3 />;
}

function Component3() {
  const user = Qa_____(UserContext);

  return <h2>{`Hello ${user} again!`}</h2>;
}

const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(<Component1 />);
```

10.   **Fill in the blanks (Qa) for the code, refer the code above Question 10.**

a. useEffect
b. UserContext
c. useMemo
d. useContext

11.   **Fill in the blanks (Qb) for the code, refer the code above Question 10.**

a. useEffect
b. UserContext

c. useMemo
d. useContext

12.   Fill in the blanks (Qc) for the code, refer the code above Question 10.

a. value
b. id
c. UserContext
d. key

13.   React is a JavaScript _____

a. framework
b. library
c. module
d. language

14.   JSX stands for _____

a. JavaScript XML
b. Java XML
c. Extensible Markup Language
d. JavaScript HTML

15.   What is the corresponding attribute used in react 'for' in label tag?

a. for
b. htmlFor
c. key
d. id

16.   Analyse the below statements and select the right & optimal solution for the error warning in Question 16.

Module build failed (from ./node_modules/babel-loader/lib/index.js):
SyntaxError: /Users/Documents/test-app/src/components/Component.js: Adjacent JSX elements must be wrapped in an enclosing tag.

a. One of the hooks has not been defined, so we can define them all
b. The import React from "react"; needs to be defined.
c. We need to wrap JSX fragment with <>…</>
d. We can ignore as this is just a warning and code is running just fine.

17.   What happens if you render an input element with disabled = {false}?

a. it will be rendered as disabled
b. it will be rendered as enabled
c. it will not be rendered at all
d. none of the above

18.   Actions and states are held together by a function called?

a. Reducer
b. Redux
c. action
d. store

19.   A store is an _____ object tree in Redux.

a. mutable
b. immutable
c. Both A and B
d. None of the above

20.   Which of the following rules are correct for Pure Functions?

a. A function returns the same result for same arguments.
b. Its evaluation has no side effects, i.e., it does not alter input data.
c. No mutation of local & global variables
d. All of the above

Analyze the React test project shared, In the code base some codes are missing and has some errors, fix them and answer to the below question

21.   What is the message that you see, post you enter the name 'dhoni' in the first screen?

a. Welcome to the team ms dhoni!!
b. Welcome To The Team MS Dhoni!!
c. Welcome to the team Ms Dhoni!!
d. welcome to the team MS Dhoni!!

22. Add any big score in the **"Enter the runs scored by the Batsman:"** and decrement or increment the value using the `-`, `+`. At what score the message **"Congrats for being the top scorer of the match!!".**

a. 265
b. 269
c. 270
d. 264

23. Click on the button **"Navigate to New Page"** and how many color bars that you can see?

a. 5
b. 6
c. 7
d. 8

24. What was the fix added to focus the input field when no value is entered?

a. inputRef.current.focus();
b. previousRef.current.focus();
c. inputRef.ref.focus();
d. inputref.ref.focus();