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| **KONGU ENGINEERING COLLEGE, PERUNDURAI - 638 060** |
| **SEMESTER ODD|CONTINUOUS ASSESSMENT TEST – III** |
| (Regulations **2020**) |

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| Month and Year | : | November2023 | Roll Number | : |  |
| Programme | : | B.Tech. | Date | : | 18.11.2023 |
| Branch | : | IT | Time | : | 02.30pm - 04.00pm |
| Semester | : | V | Duration | : | 1½ Hours |
| Course Code | : | 20ITE03 | Max. Marks | : | 50 |
| Course Name | : | User Interface Design |  |  |  |

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| **PART ­- A (10 × 2 = 20 Marks)** | | | | | |
| **ANSWER ALL THE QUESTIONS** | | | | | |
|  | Mention the role of onClick event handler in react. | | | CO4 | K2 |
|  | Compare ‘onClick’ and ‘onChange’ event handlers in react. | | | CO4 | K2 |
|  | Define Uncontrolled Component. | | | CO4 | K1 |
|  | State the primary purpose of ‘useref’ hook in react. | | | CO4 | K1 |
|  | Construct a React component that takes an array of course names as a prop and renders an unordered list (<ul>) with list items (<li>) for each course. Make sure to assign a unique key to each list item. Additionally, add a button that allows the user to add a new course to the list. | | | CO4 | K3 |
|  | Compare ‘useState’ hook and ‘useEffect’ hook in react. | | | CO5 | K2 |
|  | Identify an example of how to use the ‘useEffect’ hook to fetch and display a list of students from an API when the component mounts. | | | CO5 | K3 |
|  | Tell the significance of the dependency array in the ‘useEffect’ hook | | | CO5 | K1 |
|  | Recall the basic rule for using hooks in React and provide an example of a built-in hook that follows this rule. | | | CO5 | K1 |
|  | What is Redux? Why it is used in react applications? | | | CO3 | K1 |
| **Part – B (3 × 10 = 30 Marks)** | | | | | |
| **ANSWER ANY THREE QUESTIONS** | | | | | |
| 11. | i) | Summarize the key differences between controlled components and uncontrolled components in React. | (4) | CO4 | K2 |
|  | ii) | Illustrate the purpose of keys in React when rendering lists. Why are they important, and what problems do they help solve? Provide an example to illustrate their usage. | (6) | CO4 | K2 |
| 12. |  | Develop and implement controlled components for a user registration form for an online learning platform. The form collects essential information from users, such as their name, email, password, and a few preferences for customizing their learning experience. Create controlled components for each form field, include the use of state variables, event handlers, and any data validation. | (10) | CO4 | K3 |
| 13. |  | Demonstrate a React component that includes a login form with email and password input fields. When the user submits the form, it should send a POST request to an authentication API with the provided credentials. If the authentication is successful, display a "Welcome, [user's name]" message; otherwise, show an error message. | (10) | CO5 | K2 |
| 14. |  | Construct a React component that utilizes the useEffect hook to set up an event listener for the mousemove event on the window object. When the mouse is moved, the component should update the state with the current mouse position (x and y coordinates) and display them on the screen in real-time. Ensure that you remove the event listener when the component unmounts. | (10) | CO3 | K3 |

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| Bloom’s Taxonomy Level | Remembering  (K1) | Understanding  (K2) | Applying  (K3) | Analysing  (K4) | Evaluating  (K5) | Creating  (K6) |
| Percentage | 17 | 43 | 40 |  |  |  |