React :-

① What is React ?

* React is an open source front-end javascript library that is used for building user interface especially for single page applications.
* It is used for handling view layer for web and mobile apps.

② What are the major features of React ?

* The major features of React are :
* It uses VirtualDOM instead of Real DOM considering that RealDOM manipulations are expensive.
* Supports server-side rendering
* Follows Unidirectional data flow or data binding
* Uses Reusable / composable UI components to develop the view.

③ What is JSX ?

* JSX stands for Javascript XML file
* It allows us to write HTML inside Javascript file.

ex :-
```
class App extends React.Component {
    render() {
        return
            <div>
            <h1> Hi Welcome ! </h1>
            </div>
    }
}
```

(4) What is the difference between element and component?

* An element is plain object describing what you want to appear on the screen in terms of the DOM Nodes or other components.

* Creating a React element is cheap once an element is created it is never mutated.

(5) * Components:-
Components are building blocks of any React application. It describes the part of your UI.

* Components are reusable and independent bits of code they serve same purpose as JavaScript functions.

(5) How to create components in React?

* There are two possible ways to create a component.

1) Function components:- This is the simplest way to create a component those are pure JavaScript functions that accept props object as the first parameter and return React elements.

2) Class components:- You can also use ES6 class to define a component.

(6) What are pure components?

A pure components is a component that performs a check on the value of React props before deciding whether to re-render the component or not

(7) What is state in React?

* State of a component is an object that holds some information that may change over the lifetime of the component
* we should always try to make our state as simple as possible and minimize the number of stateful components.

(8) What are props in React?

* Props are inputs to components They are single values or objects containing a set of values that are passed to components on creation using a naming convention similar to HTML-tag attributes

(9) What is the purpose of callback function as an argument of setState()?

* The callback function is invoked when setState finished and the component gets rendered. Since setState() is asynchronous the callback function is used for any post action.

(10) What are synthetic events in React?

* Synthetic events is a cross-browser wrapper around the browser's native event. It's API is same as the browser's native event.

(11) What is key prop and what is the benefit of using it in arrays of elements?

* A key is a special string attribute you should include when creating arrays of elements.
* Key props helps react identify which items have changed are added or are removed.

(12) What is the use of refs?

* The ref is used to return a reference to the element. They should be avoided in most cases however they can be useful when you need a direct access to the DOM element or an instance of a component.

(13) What is Virtual Dom?

The virtual Dom (VDom) is an in-memory representation of Real Dom the representation of a UI is kept in memory and synced with the "real" Dom, it's a step that happens between the render function being called and the displaying of elements on the screen.

(14) What are controlled components?

* A component that controls the input elements within the forms on subsequent user input is called controlled component.

(15) What are uncontrolled components?

* The uncontrolled components are the ones that store their own state internally and you query the DOM using a ref to find its current value when you need it

(16) What is context?

* context provides a way to pass data through the component tree without having to pass props down manually at every level.

(17) What are stateless components?

* If the behaviour is independent of its state then it can be stateless component you can use either a function or a class for creating stateless components.

(18) What are stateful components?

* If the behaviour of component is dependent on the state of the component then it can be termed as stateful component.