

Name _____

```
function Person( name, surname){  
    this.firstname = name;  
    this.lastname = surname;  
}
```

```
Person.prototype.printName = function() { console.log(this.firstname + this.lastname)};
```

Q.1 The above function is an example of _____

Q.2 Explain what happens when I call the above function in conjunction with the new keyword?
[In more detail than - "A new object is created"! 3-4 step explanation expected]

```
var p1 = new Person("Johny", "Depp");
```

Q.3 What do Person.prototype and Person.__proto__ refer to, respectively?

Q.4 What will be the output of the marked lines and why?

```
var p1 = new Person("Johny", "Depp");  
p1.printName(); // Output is _____
```

```
onclick = p1.printName; // Output is _____  
onclick(); // Output is _____
```

Q.5 Write the above code using ES6 style classes - (class keyword)

Q.6 "react" is a node module.

Explain how the following import statements would differ.

```
var react = require("react");  
import React from "react";  
import * as React from "react";
```

Q.7 a) What is ECMAScript? b) How does it differ from JavaScript? c) Name two versions of ES that we have used this week - state the differences that matter in the context of this workshop? d) How did we handle these differences - what tools/processes etc?

Q.8. What is transpilation? How does it differ from compilation?

Q.9 Give a one-line description for each of the following modules

- a) webpack
- b) babel-core
- c) babel-cli
- d) babel-loader
- e) babel-preset-react
- f) babel-preset-es2015
- g) react
- h) react-dom

Q.9 a) What is JSX? b) Explain the difference in the following two JSX style statements.

```
var x = <div> Hello </div>;  
var y = <MyHelloReactComponent />;
```

Q.10 State some differences between props (this.props) and state (this.state) in reference to React Components

Q.11 We have an array of strings : say var data = ["a", "b", "c", "d"]. Use array.map and this array to rewrite the following code in render() method of a React component

```
render(){ return (  
  <div>  
    <div>a</div><div>b</div><div>c</div><div>d</div>  
  </div>  
});
```

Q.12 This is HTML style code. Rewrite this using JavaScript embedded in JSX.

```
<div style="margin-left:20px;margin-right:10px">
```

Q. 14 Write a sample React Component class to illustrate the usage of state.

- a) The React Component should have an initial state
- b) The render() function should use that state
- c) There should be an event that should invoke a method that should modify the state

[You can be creative in what you store in state and what you render. Emphasis is on correct usage of state in a React Component]

Q.15 “./node_modules/.bin/webpack —watch

a) Explain why we need webpack in our codebase?

b) What does the watch flag do?

c) Explain what the above command would do with respect to the following config file (explain all configuration parameters used here - be verbose)

```
var webpack = require('webpack');
var path = require('path');

var BUILD_DIR = path.resolve(__dirname, 'static/');
var APP_DIR = path.resolve(__dirname, 'src/');

var config = {

  entry : APP_DIR + '/app.jsx',

  output: {
    path: BUILD_DIR,
    filename: 'bundle.js'
  },

  module : {
    loaders : [
      {
        test : /\.jsx?/,
        include : APP_DIR,
        loader : "babel-loader"
      }
    ]
  }
};

module.exports = config;
```

Q.16 What's the difference between export and export default in ES6 style modules.

Q. 17 React is a declarative language - explain this statement.

Q. 18 This code desperately needs your help! There are so many errors / anti-patterns here. Specify the errors/anti-patterns in each of the Sections.

- A point for identifying each error
- +5 bonus points for identifying ≥ 6 errors
- Mark the issue in the code inline and write short description as a comment.

```
// Section A
```

```
import react from "react";  
import ReactDOM from "react-dom";
```

```
// Section B
```

```
export default class SomeButton extends react.Component{  
  constructor(props){  
    this.state = {name : "Button Has Not Been Clicked"};  
  }  
  handleClick(event){  
    var new_name = "Button Was Clicked Atleast Once"  
    this.state.name = new_name;  
  }  
  render(){  
    <button onClick={handleClick()}>this.state.name</button>  
  }  
}
```

```
// Section C
```

```
export default class Hello2 extends react.Component{  
  render(){  
    this.props.name = "Hello +" this.props.name;  
    return (<div>this.props.name</div>);  
  }  
}
```

```
// Section D
```

```
var somenode = document.getElementById("app");  
ReactDOM.render(<SomeButton>, somenode);  
//ReactDOM.render(<Hello2 name={Coding Blocks}/>, somenode);
```

Name _____

Keep this sheet with you. Submit the rest.