**Assessment theory 1**

**1Q) Closures:-** Converting a stateless function to a stateful function is called closures

* Function which returns an another function , and that function Is going to be a inner function of the outside function.
* **Example:-**

Function outerfunction (a) {

let a = 100;

return function innerfunction(b) {

let b = 200;

return a+b;

}

Console.log(outer Function(100)(200));

}

**2Q) (i) Shallow copy:-** A shallow copy will have only one instance of object shared by multiple reference variables.

* **Example:-**

Var employee = {

Id: “102”,

empName: “rupa”,

empAddress: “Hyderabad”,

empSalary: 40000

}

Console.log(“Employee=>”,employee);

Var newEmployee=employee; **//shallow copy**

Console.log(“NewEmployee=>”,newEmployee);

Console.log(“---aftermodification—“);

newEmployee.ename=”Mahi”;

console.log(“Employee=>”,employee);

console.log(“NewEmployee=>,employee);

**(ii) Deep copy:-**

* Json.stringify((empobj)); 🡪 converts object to string
* Json.parse 🡪 converts string to object.

**Exapmle:**

Let CopiedObj = Json.parse(Json.stringify(empobj));

Console.log(empobj);

Console.log(copiedobj);

CopiedObj.firstName = “anil”;

Console.log(empobj);

Console.log(copiedobj);

**3Q) Destructing of an object:-**

The object destructuring is a useful JavaScript feature to extract properties from objects and bind them to variables.

**Eg:** let empObj={

firstName:”Rupa”,

lastName:”devi”,

};

Let {firstName:fName,lastName:lName}=empObj;

Console.log(fName);

Console.log(lName);

🡪This is known as object destructing.

**4Q) Arrow Functions:**  If we have single statement then we can use arrow function.

Eg: var mul1 = (a,b) => a\*b;

Console.log(mul(100,200));

**5Q) Higher Order Functions:-**

A “higher-order function” is a function that accepts functions as parameters and/or returns a function.

1. For each:

A function that accepts up to three arguments .foreach calls the callback function one time for each element in the array

Eg: let marks = [ 45,56,67,39,87,58];

Marks.foreach((ele)=> console.log(ele));

1. Map:

Action on every element and return ,we use map.

Eg; let marks = [ 45,56,67,39,87,58];

Let newMarks = marks.map((ele)=>ele+5);

Console.log(newMarks);

1. Filter:

To return a element based on a predicate or particular condition then we use filter method.

Eg; let first = average.filter((ele)=> ele>=60)

Console.log(first);

Let second = averages.filter((ele) => ele>=50 && ele <60);

Console.log(second);

1. Reduce:

To calculate total of each marks.

Eg; let totalMarks= marks.reduce((sum,ele)=>{

Sum=sum+ele;

Return sum;

},0);

Console.log(total Marks);

**6Q) Event looping:**

An event loop is something that pulls stuff out of the queue and places it onto the function execution stack whenever the function stack becomes empty.

The event loop got its name because of how it's usually implemented, which usually resembles:

while (queue.waitForMessage()) {

queue.processNextMessage();

}

queue.waitForMessage() waits synchronously for a message to arrive (if one is not already available and waiting to be handled).

**7Q) Building blocks of an angular application:**

* Modules ---> @ng module()
* Components --->@component()
* Directives ---> @directive()
* Pipes ---> @pipe()
* Interceptors ---> @injectable()
* Gaurds ---> @injectable()
* Routing --->
* Services ---> @injectable()

**🡪** Modules & component are important for project and it takes only classes inside (or) a component.

**8Q) Advantages of angular in web app development:**

Angular, being a part of the JavaScript ecosystem, is currently one of the most popular software development tools.

1. Large Open Source Projects and Community

**2. Simple Testing**

## **3. Simple Creating by means of Declarative Templates**

## **4. Widely-Supported Framework**

## **5. Consistent Code**

## **6. Increased Responsiveness** **through Two-Way Data Binding**

## **7. World-Class Speed and Performance**

**9Q) Single page application:**

A single page application usually known as SPA,is a web app which uses only a single HTML page and only a part of the page instead of the entire page gets updated with every click of the mouse.

Advantages:

* The loading time is less in single page applications.
* The user experience can be improved by SPAs.
* A feature rich application can be built well with the help of SPAs.
* Uses less internet bandwith as there will be only one page loading.

**10Q) Different data bindings in angular:**

1. One way binding ---🡪 { { } } [ string interpolation, model to view]
2. Property binding ---🡪 [ ] model to view
3. Event binding -🡪 ( ) view to model
4. 2 way binding -🡪 [ ( ) ] model to view & vice versa.
5. Attribute binding -🡪 [attrib.attributeName] model to view