**NITTE** | **NITTE MEENAKSHI INSTITUTE OF TECHNOLOGY**
EDUCATION TRUST

An Autonomous Institution Affiliated to Visvesvaraya Technological University, Belagavi
Approved by AICTE, New Delhi and Accredited by NAAC 'A+' Grade
Yelahanka, Bengaluru-560064, Karnataka, India

# Department of Information Science and Engineering

## Web Programming Lab – 18ISL67

### General bases Problems – Part A

1. Write a function numTest that takes a number as an argument and returns a Promise that tests if the value is less than or greater than the value 20. **CO1, 2**

2. Write a JavaScript code to handle multiple call back functions using JavaScript promises (use promiseobject.then(onfulfilled,onrejected)). **CO2, CO4**

3. Write a program to store values into a set, and to retrieve value from the set, to iterate over the set **CO2, 4**

4. Write a program to store values into a map, and to retrieve value from the map using key, to iterate over the map **CO2, CO4**

5. Write a JavaScript code to insert and remove elements from the array for the given index **CO1**

6. Write a JavaScript code that returns a passed string with letters in alphabetical order. Use addEventListener() method. **CO2, CO4**

7. Apply JavaScript Arrow function to reverse a given Number. Given Number = 12243; *Expected Output: 34221* **CO2, CO4**

8. Write an arrow function named sumEvens that accepts an array of numbers and returns the sum of the even numbers in the array. **CO2, CO4**

9. Write a JavaScript code to perform Jump Search for a given key and report success or failure. Prompt the user to enter the key and a list of numbers. **CO2, CO4**

10. Write a JavaScript code to print all the Disarium numbers between 1 and 100. **CO2, CO4**

11. Write JavaScript code to encrypt the text using Caesar Cipher technique. Display the encrypted text. Prompt the user for input and the shift pattern. **CO2, CO4**

12. Write a JavaScript function.
    a. to capitalize the first letter of each word in a string.
    b. to insert a string within a string at a particular position
    c. to check whether an 'input' is a string or not **CO2, CO4**
    d. to split a string and convert it into an array of words.

13. Write a JavaScript code to multiply each number in the array by 10 and return the result using the map () function with arrow notation.

14. Write a JavaScript program to list the properties of a JavaScript object.
Sample object:
var student = {
name : "Mohan Kumar",
Dept : "ISE",
id : 056 }; **CO1**
Sample Output: Mohan Kumar, ISE, 056

## Application based Problems – Part B

1. Show how map is different from object to store key value pairs with coding example and prove Maps perform better than objects in most of the scenarios involving addition and removal of keys.

CO2, CO4

2. Show how set is different from array to store the value with coding example and prove Sets perform better than Arrays in most of the scenarios involving searching values present in it.

CO2, CO4

3. Implement a JavaScript promise to perform arithmetic operations. Display result for each operation synchronously using await () method. (Give delay in each promise object using settimeout() method).

CO2, CO4

4. Write a Javascript program where user passes the location and a function is called which returns a promise, if the location passed is Paris Below is the output expected:

"Let's take a trip to Paris"

If the location is other than Paris, show the error message "Invalid Location"

CO2, CO4

5. Write a JavaScript program to book a hotel only after booking a flight.

[Hint: To achieve this, the promise returned from the bookHotel function is resolved only after resolving the promise from bookFlight function.

If the promise gets rejected from bookflight then it won't execute the second function.]

CO2, CO4

6. Write an arrow function that will take one parameter weight in Kg. This arrow function will convert Kg to Lbs. Formula is kg*2.2

- If LBS is > 150, then the function should return "obese"
- If LBS is between 100 to 150, the function should return "you are ok"
- If LBS is < 100, then the function should return "underweight"

CO2, CO4

7. In the Martian land faraway, a new virus has evolved and is attacking the individuals at a fast pace. The scientists have figured out the virus composition, V. The big task is to identify the people who are infected. The sample of N people is taken to check if they are POSITIVE or NEGATIVE. A report is generated which provides the current blood composition B of the person.

POSITIVE or NEGATIVE?

If the blood composition of the person is a subsequence of the virus composition V, then the person is identified as POSITIVE otherwise NEGATIVE.

Example:

Virus Composition, V = coronavirus

Blood Composition of the person, B = ravus

The person in question is POSITIVE as B is the subsequence of the V.

The scientists are busy with their research for medicine and request you to build a program which can quickly figure out if the person is POSITIVE or NEGATIVE. They will provide you with the virus composition V and all the people's current blood composition. Can you help them?

Note: The virus and blood compositions are lowercase alphabet strings.

CO2, CO4