Assignment Module -06
JavaScript Basic And DOM (Document Object Module.)

Q.1 what is JavaScript. How to use it?

Ans: J-S is a client side scripting Language. J-S is case sensitive and camel-case language. In J-S there are total 32 keywords. There are total two types of J-S. First is internal java script and second is external java script.

Q.2 How many type of Variable in JavaScript?

Ans: In J-S there are total two types of variable . Variable is used to store the value.There are some basic rules of the variable declaration.

1. Can't start with number. (1,44,667,760)
2. Can't start with symbol (#,{ , } ,$ …).
3. Can't start with J-S keyword. (alert, document, name …)

Global Variable : In J-S you can declare global variable where you can use it throughout the J-S code. To declare global variable in J-S you can use "var" keyword to declare it.

E.g : var a=10.

  Where var is the keyword and it's understand automatic that a is global variable and its value is 10 and you can use variable "a" through out the J-S code.

Local Variable: In J-S you can declare local variable as a TWO methods.Use of local variable is valid only for its boundary. Ex: if you use for only function then its used only through out the of the particular function not for global.

1. Using keyword "let" :

    let a=10

2. Using keyword "const"

    Const a=10.

There is some difference between variable / declaration in J-S is as below.

```
For Global declaration

var name1 = "ahmedabad" //declaration
var name1 = "Baroda" //re-declaration
name1 = "Surat" // re-assissgemnt
console.log(name1)
For Local declaration
let (local socpe)

let number1 = 90 //declaration
// let number1 = 80 //not allow re-declaration
number1 = 60  // allow re-assissgemnt
console.log (number1)

For using const….

const (unique)
const number2 = 50 //declaration
// const number2 = 80 //not allow deliration
number2 = 20 // not allow in re-assignment
console.log(number2)
```

Q.3 Define a Data Types in js?

Ans: In J-S there are mainly TWO types of data types.

1. **Primitive data type** : In primitive data types you can store only single value in a variable.

   There are many primitive datatypes are as follow.

   String,

   number,

   undefined,

   null,

   Boolean,

   bigint,

   symbol.

2. **Non primitive datatypes :** is used to store more then one value in a variable.

   There are following two types of non primitive datatypes are as follow.

   Array,

   Object.

Example: to see that on which variable have datatypes.

```
<script>
        var name1 = "Ahmedabad"
        console.log(typeof(name1))

        var numb2 = 6.7
        console.log(typeof(numb2))

        var ab
        console.log(typeof(ab))

        var sah = null
        console.log(typeof(sah))

        var codit = false
        console.log(typeof(codit))

        var numb1 = BigInt(326278567648732564872354783256)
        console.log(numb1)
        console.log(typeof(numb1))

        // var shn = Symbol()

    </script>
```

Q.4 Write a mul Function Which will Work Properly When invoked With Following Syntax.

Ans   : See in the practical list...

Q.5 What the deference between undefined and undeclare in JavaScript?

Ans : In J-s if you declare variable but not assign value then it's called undefined variable.

Example:

```
<script>
    var a
    console.log(a)  // Here its show me output as a undefined.
</script>
```

In J-S if you not declare the variable but still print is showing the "reference error as a undeclared" of the variable.

Example:

```
<script>
        var a = 30
        console.log(a)
        console.log(b)   // Here b is a un-declare variable
    </script>
```

Q.6 Using console.log() print out the following statement: The quote 'There is no exercise better for the heart than reaching down and lifting people up.' by John Holmes teaches us to help one another. Using console.log() print out the following quote by Mother Teresa:

Ans : See in the practical list...

Q.7 Check if typeof '10' is exactly equal to 10. If not make it exactly equal?
Ans: See in the practical list...

Q.8 Write a JavaScript Program to find the area of a triangle?
Ans :   See in the practical list...

Q.9 Write a JavaScript program to calculate days left until next Christmas?
Ans : See in the practical list...

Q.10 What is Condition Statement?
Ans : in J-S if you want to do compare anything as your requirement then you can use condition statement. In J-S there are many condition statement

  Simple if statement(),
  If else statement(),
  If else if statement(),
 Nested if else(),
 Switch..case () statement …

Q.11 Find circumference of Rectangle formula : C = 4 * a ?
Ans : See in the practical list...

Q.12 WAP to convert years into days and days into years?
Ans : See in the practical list...

Q.13 Convert temperature Fahrenheit to Celsius? (Conditional logic Question)

Ans: See in the practical list...

Q.14 Write a JavaScript exercise to get the extension of a filename.?

Ans : See in the practical list...

Q.15 What is the result of the expression (5 > 3 && 2 < 4)?

Ans : Here , we wrote the && ("and" Logical operator) that mean both condition must be true and here is condition is false that is "2 < 4" so the whole condition will be false and its going to false part orelse out side of the condition.

Q.16 What is the result of the expression (true && 1 && "hello")?

Ans : In J-S the value of true , 1 and && all are truthy so the output is →   hello

Q.17 What is the result of the expression true && false || false && true?

Ans : In J-S , Here we wrote true && false and in J-S both should be true and here is false so the result is → false

Q.18 What is a Loop and Switch Case in JavaScript define that ?

Ans :   In J-S, the use of loop is when you want to make calculation repetitive or print statement more then a times that times loops is used while switch case() is use as a selction or works as a conditional statement.

Q.19 What is the use of is Nan function?

Ans : In J-S the Nan() function is used to convert the values into the number before testing it. And this function return "true" if the number is not a number.

Q.20 What is the difference between && and || in JavaScript?

Ans : in J-S this is both are logical operator and used with condition to check the vales. The use of logical and "&&" operator mean both condition must be true then its return true otherwise its return false
Example:

If(7>3 && 4>2) here both condition is true then it return true

If(7>3 && 1>2) here one condition is not true then it return false and whole condition is false
Where, logical OR (||) operator mean if any one condition is true the whole condition is true
Example:

If(1>3 || 4>2) here both condition is false then it return false and whole condition is false

If(7>3 || 1>2) here one condition is not true then still return true because of OR operator.

Q.21 What is the use of Void (0)?

Ans: in J-S void (0) is returned "undefined". void operator is valid in all environment where in java script run like browser , jode.js, java script.

Q.22 Check Number Is Positive or Negative in JavaScript?

Ans : See in the practical list...

Q.23 Find the Character Is Vowel or Not ?

Ans: See in the practical list...

Q.24 Write to check whether a number is negative, positive or zero?

Ans : <mark>See in the practical list...</mark>

Q.25 Write to find number is even or odd using ternary operator in JS?

Ans : <mark>See in the practical list...</mark>

Q.26 Write find maximum number among 3 numbers using ternary operator in JS?

Ans : <mark>See in the practical list...</mark>

Q.27 Write to find minimum number among 3 numbers using ternary operator in JS?

Ans : <mark>See in the practical list...</mark>

Q.28 Write to find the largest of three numbers in JS?

Ans : <mark>See in the practical list...</mark>

Q.29 Write to show

 i. Monday to Sunday using switch case in JS?

Ans : <mark>See in the practical list...</mark>

ii. Vowel or Consonant using switch case in JS?

Ans : <mark>See in the practical list...</mark>

(Conditional looping logic Question)

Q.30 What are the looping structures in JavaScript? Any one Example?

Ans : in J-S there are total 3 types of loop available

    For loop ()

    While loop () and

    Do..while loop()

For loop () : is use to print the repetitive code / statement.

Example :

```
<script>
    for(let i=0; i<=5; i++)
    {
     document.write("<br>",i)
    }
</script>
```

Q.31 Write a print 972 to 897 using for loop in JS?

Ans : See in the practical list...

Q.32 Write to print factorial of given number?

Ans : See in the practical list...

Q.33 Write to print Fibonacci series up to given numbers?

Ans : See in the practical list...

Q.34 Write to print number in reverse order e.g.: number = 64728 ---> reverse =82746 in JS?

Ans : See in the practical list...

Q.35 Write a program make a summation of given number (E.g., 1523 Ans: - 11) in JS?

Ans : See in the practical list...

Q.36 Write a program you have to make a summation of first and last Digit. (E.g., 1234 Ans: - 5) in JS?

Ans : See in the practical list...

Q.37 Use console.log() and escape characters to print the following pattern in JS?

        1 1 1 1 1

        2 1 2 4 8

        3 1 3 9 27

        4 1 4 16 64

        5 1 5 25 125

Ans : See in the practical list...

Q.38 Use pattern in console.log in JS?

Ans : <mark>See in the practical list...</mark>

1

1 0

1 0 1

1 0 1 0

1 0 1 0 1

Ans : <mark>See in the practical list...</mark>

A

AB

ABC

ABCD.....

<mark>See in the practical list...</mark>

1

12

123

1234

12345

<mark>See in the practical list...</mark>

*

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Q.39 Accept 3 numbers from user using while loop and check each numbers palindrome?

Ans: <mark>See in the practical list...</mark>

Question from 40 to 49 did as a practical

Array And Object Questions.

Q-50 .What is the drawback of declaring methods directly in JavaScript objects?

Ans : One of the drawback of creating true private method in javascript is that they are memory insufficient because a new copy of the method would be created for each instance.

Question from 51 to 58 (expect 57) did as a practical

Q-57. How many type of JS Event? How to use it?

Ans : There are around 10 types of events are in JS and each has to be used as per the requirement.
Here I explain one of the event

Onmouseover: this event is used when , The mouse pointer moves over an element.

Same as there are many events and each has their own role.

Q.59 What is Bom vs Dom in JS?
Ans : The window object represents a window in browser. An object of window is created automatically
by the browser. Where , DOM -> Document Object Model in JavaScript is the API to access the elements
inside the document.

Q.60 Array vs object defences in JS?
Ans : Arrays are declared using [] square brackets notation in JavaScript. On the other hand, an object is
a collection of key-value pairs that is used to store various related data.