MCQ

1. We can declare all types of variables in javascript using Keyword _____(Easy)(Programming Fundamentals - JavaScript)

a. var
b. obj
c. jvar
d. None of these
Answer: a

2. What will be the output of the following code snippet? (Easy)(Programming Fundamentals - JavaScript)

```
var a = "Scaler";
var result = a.substring(2, 4);
console.log(result);
```

a. al
b. ale
c. cal
d. caler
Answer: a

3. What keyword is used to check whether a given property is valid or not? (Easy)(Programming Fundamentals - JavaScript)

a. in
b. is in
c. exists
d. lies
Answer: a

4. JavaScript is ideal to..... (Easy)(Programming Fundamentals - JavaScript)

a. make computations in HTML simpler
b. increase the download time for the client
c. increase the loading time of the website
d. minimize storage requirements on the web server
Answer: d

5. JavaScript code can be calling by using..... (Easy)(Programming Fundamentals - JavaScript)

a. RMI
b. function/method
c. Preprocessor
d. Triggering event
Answer: b

6. What kind of expression is “new Point(2,3)”? (Easy)(Programming Fundamentals - JavaScript)

a. Primary expression
b. invocation expression
c. Object creation expression
d. Constructor calling expression

Answer: c

7. It is a common practice to declare arrays with the _____ keyword. (Easy)(Programming Fundamentals - JavaScript)

a. var
b. let
c. const
d. none of the above

Answer: c

8. What will happen if a return statement does not have an associated expression? (Easy)(Programming Fundamentals - JavaScript)

a. It will throw an exception
b. It returns the value 0
c. It will throw an error
d. It returns the undefined value

Answer: d

9. The method that performs the search-and-replace operation to strings for pattern matching is _____ (Easy)(Programming Fundamentals - JavaScript)

a. replace()
b. add()
c. edit
d. searchandreplace()

Answer: a

10. When an operator’s value is NULL, the typeof returned by the unary operator is: (Easy)(Programming Fundamentals - JavaScript)

a. Boolean
b. Undefined
c. Object
d. Integer

Answer: c

11. What will be the output of the following code snippet? (Easy)(Programming Fundamentals - JavaScript)

```
var a = 1;
var b = 0;
while (a <= 3)
{
```

```
    a++;
    b += a * 2;
    console.log(b);
}
```

a. 4 10 18
b. 1 2 3
c. 1 4 7
d. None of the above
Answer: a

12. What will be the output of the following code snippet? (Easy)(Programming Fundamentals - JavaScript)

```
var a = Math.max();
var b = Math.min();
console.log(a);
console.log(b);
```

a. –infinity infinity
b. infinity –infinity
c. infinity infinity
d. –infinity –infinity
Answer: a

13. What will be the output of the following code snippet? (Easy)(Programming Fundamentals - JavaScript)

```
var a = Math.max() < Math.min();
var b = Math.max() > Math.min();
console.log(a);
console.log(b);
```

a. true false
b. false true
c. true true
d. false false
Answer: a

14. What will be the output of the following code snippet? (Easy)(Programming Fundamentals - JavaScript)

```
var a = true + true + true * 3;
console.log(a)
```

a. 3
b. 0
c. Error
d. 5
Answer: d

15. What will be the output of the following code snippet? (Medium)(Programming Fundamentals - JavaScript)

```
var a = "hello";
var sum = 0;
```

```
for(var i = 0; i < a.length; i++) {
  sum += (a[i] - 'a');
}
console.log(sum);
```

a. 47
b. NaN
c. 0
d. None of the above
Answer: b

16. Initialization of a variable can be done by writing _____ operator in between variable name and operand value(Easy)(Programming Fundamentals - JavaScript)
a. Equals
b. =
c. Value
d. ==
Answer: b

17. What will be the output of the following code snippet? (Easy)(Programming Fundamentals - JavaScript)

```
const obj1 = {Name: "Hello", Age: 16};
const obj2 = {Name: "Hello", Age: 16};
console.log(obj1 === obj2);
```

a. true
b. false
c. Undefined
d. None of the above
Answer: b

18. An _____ is a special variable, which can hold more than one value (Easy)(Programming Fundamentals - JavaScript)
a. string
b. integer
c. character
d. array
Answer: d

19. Recursion is a method in which the solution of a problem depends on _____ (Easy)(Programming Fundamentals - JavaScript)
a. Larger instances of different problems
b. Larger instances of the same problem
c. Smaller instances of the same problem
d. Smaller instances of different problems
Answer: c

20. Which of the following problems can't be solved using recursion? (Easy)(Programming Fundamentals - JavaScript)
a) Factorial of a number
b) Nth fibonacci number
c) Length of a string
d) Problems without base case
Answer: d

21. In recursion, the condition for which the function will stop calling itself is _____ (Easy)(Programming Fundamentals - JavaScript)
a) Best case
b) Worst case
c) Base case
d) There is no such condition
Answer: c

22. If an array with five elements a=[1,2,3,4,5]; what will do the expression a.length=0 (Easy)(Programming Fundamentals - JavaScript)
a) checks length of array is 0 or not
b) deletes all elements
c) replaces all elements with 0
d) adds 0 at the beginning
Answer: b

23. While iterating elements of an array a,..... will test the array elements in order to skip null, undefined and non-existent elements. (Easy)(Programming Fundamentals - JavaScript)
a) !a[i] if(!null)
{}
b) a[i]= = = undefined
c) !(i in a)
d) !a.hasOwnProperty(i)
Answer: a

24. The ..... method in JavaScript is a general purpose method for inserting or removing elements from an array. (Easy)(Programming Fundamentals - JavaScript)
a) Array.join( )
b) Array.concat( )
c) Array.slice( )
d) Array.splice( )
Answer: d

25. Array indexes start with _____. (Easy)(Programming Fundamentals - JavaScript)
a. -1
b. 0

c. 1
d. Cannot say
Answer: b

26. Arrays always use numbered indexes. (Easy)(Programming Fundamentals - JavaScript)
a. Yes
b. No
c. Can be yes or no
d. Cannot say
Answer: a

27. What will happen, if the following JavaScript code is executed? (Medium)(Programming Fundamentals - JavaScript)

```
var count =0;
while (count <10)
{
    console.log(count);
    count++;
}
```

a. An error is displayed
b. An exception is thrown
c. The values of count variable are logged or stored in a particular location or storage
d. The value of count from 0 to 9 is displayed in the console
Answer: d

28. Which of the following is the correct output for the following JavaScript code: (Medium)(Programming Fundamentals - JavaScript)

```
var x=3;
var y=2;
var z=0;
if(x==y)
document.write(x);
elseif(x==y)
document.write(x);
else
document.write(z);
```

a. 3
b. 0
c. Error
d. 2
Answer: b

29. n JavaScript the x===y statement implies that: (Easy)(Programming Fundamentals - JavaScript)
a. Both x and y are equal in value, type and reference address as well.

b. Both are x and y are equal in value only.
c. Both are equal in the value and data type.
d. Both are not same at all.
Answer: c

30. Variable declared without a value will have the value _____(Easy)(Programming Fundamentals - JavaScript)
a. undefined
b. 0
c. Null
d. None of these
Answer: a

Round 2

Problem Statement 1

Given an integer n as input, you have to calculate the sum of all numbers from 1 to n using recursion

Constraint

• n >= 1

Input Format

• a integer n

Output Format

• Print the output

Sample Input 1

2

Sample Output 1

3

Explanation of Sample 1

1 + 2 = 3

Sample Input 2

4

Sample Output 2

10

Explanation of Sample 2

1+2+3+4 = 10

Sample Input 3

10

Sample Output 3

55

Explanation of Sample 3

1+2+3+4+5+6+7+8+9+10= 55

Template:

```
        let n = parseInt(readline());
        console.log(sum(n));

 function  sum(n){
}
```

Solution:
https://ideone.com/I4HZBs

nX+Y=z
n=(z-y)/x

Problem Statement 2

You are given that a mango weighs X kilograms and a truck weighs Y kilograms. You want to cross a bridge that can withstand a weight of Z kilograms.
Find the **maximum** number of mangoes you can load in the truck so that you can cross the bridge safely.

Input Format
* First line will contain T, the number of test cases. Then the test cases follow.
* Each test case consists of a single line of input, three integers X,Y,Z - the weight of mango, the weight of truck and the weight the bridge can withstand respectively.

Output Format
For each test case, output in a single line the **maximum** number of mangoes that you can load in the truck.

Constraints
* $1 \leq T \leq 1000$
* $1 \leq X \leq Y \leq Z \leq 100$

Sample Input 1
4
2 5 11
4 10 20
1 1 1
6 40 90

Sample Output 1
3
2
0
8

Explanation
Test case 1
You can load 3 mangoes at maximum. The total weight is $3 \times 2+5=11 \leq 11$. Thus, the truck can safely cross the bridge with 3 mangoes. If you load 4 mangoes, the total weight is
$4 \times 2+5=13>11$.

Test case 2
You can load 2 mangoes at maximum. The total weight is $2 \times 4+10=18 \leq 20$. Thus, the truck can safely cross the bridge with 2 mangoes.

Test case 3
You can load 0 mangoes at maximum. The total weight is 0×1+1=1≤1. Thus, the truck can safely cross the bridge only if there are 0 mangoes.

Test case 4
You can load 8 mangoes at maximum. The total weight is 6×8+40=88≤90. Thus, the truck can safely cross the bridge with 8 mangoes.

Template:

```
                let t = readline();
              while(t--){
                 let arr = [];
        arr = readline().split(" ");

            let  x = arr[0];
            let  y = arr[1];
           let  z = arr[2];
// write your logic here
                    }
```

Solution:
https://www.ideone.com/l3tujK

Round 3

Create a character count App. In this user will the enter the string in the textbox and on the button click to find the number of characters in the string

Round 4

Check whether the string entered is palindrome or Not(Since Javascript is a case sensitive language use lowercase letters only)

Template for round 3 and round4:
https://jsfiddle.net/yp071q2b/2/

Solution for Round 3 and Round4:
https://jsfiddle.net/mfcbhku3/1/