EXPLORING THE DIGITAL WORLD

Name	
Department	
College	
Date	

Duration : 45 Minutes

Total Mark : 10

Each Question Carries 1 Mark

1. Sanjeeth is making a questionnaire of True or False questions. He want to define a data type which stores the response of the candidate to the question. Which is the most-suitable data type for this purpose?

a. Integer b. Boolean c. Float d. Character

2. What will be the output of the following pseudo-code statements:

```
integer a = 456, b, c, d =10 ;
b = a/d ;
c = a – b;
print c;
```

a. 410 b. 410.4 c. 411 d. 411.4

3. Sanjay want to store the mark of the student which has the range of 0 – 100, How many bits will you assign to the data type to be able to store the mark value?

a. 5 b. 6 c. 7 d. 8

4. What is implied by the argument of a function?

a. The variables passed to it when it is called
b. The value it returns on execution
c. The execution code inside it
d. Its return type

5. What does the following function do?

```
int operation(int a, int b) {
if (a>b)
return operation(b,a)
else
return a; }
```

a. Always returns the first parameter
b. Returns the min of (a, b)
c. Returns the max of (a, b)
d. Loops forever

6. Sanjana wants to make a program to print the sum of all perfect cubes, where the value of the cubes goes from 0 to 100. She writes the following program:

```
integer I = 0, a; // statement 1
integer sum = 0; a = (I*I*I);
while (I<100) // statement 2
{
sum = sum + a; // statement 3
I = l + 1;
a = (I*I*I); // statement 4
} print sum;
```

Does this program have an error? If yes, which one statement will you modify of correct it?

a. Statement 1
b. Statement 2
c. None of these
d. Statement 3
e. Statement 4

7. Consider the given code:

```
for i = m to n increment 2
{print "Hello!" }
```

For m < n and exactly one of (m, n) is even, how many times will Hello be printed?

a. (n - m + 1)/2
b. 1 + (n - m)/2
c. 1 + (n - m)/2 if m is even, (n - m + 1)/2 if m is odd
d. (n - m + 1)/2 if m is even, 1 + (n - m)/2 if m is odd

8. The Object-Oriented Paradigm necessarily contains which of these properties:
(I.) Encapsulation (II.) Inheritance (III.) Recursion

a. (II) Only
b. (I) Only
c. (I) and (II) only
d. (I), (II) and (III)

9. Smita is making a database of animal types in a zoo and their properties. The possible animals are dog, lion and giraffe. Each one has attributes like food-habit, habitat, color and sound. She uses the object oriented programming paradigm for this. How will he conceptualize the system?

a. 'Animal' will be a class; 'dog', 'lion', 'zebra' the objects and 'food-habit', 'habitat', 'color' and 'sound',
the data members of the class.
b. 'Animal' will be a class; 'dog', 'lion', 'zebra' the data members of the class; 'food-habit', 'habitat', 'color'
and 'sound' the objects of the class.
c. 'Animal' will be 'object'; 'dog', 'lion', 'zebra' the classes and 'food-habit', 'habitat', 'color' and 'sound' the
data members of the class.
d. None of these.

10. Consider the following program

```
int main()
{
        int n,sum=0;
        printf("Enter n value:");
        scanf("%d",&n);
while(n>0)  {
        sum += _____; //Statement 1
        n = _____;    // Statement 2
}
        printf("%d",sum);
}
```

Sample Input and output :
1. Input : n = 6784 Output: 25
2. Input : n = 1234 Output: 10
3. Input : n = 5621 Output: 14

Fill out the Statement 1 and Statement 2.

Answer

1	2	3	4	5
6	**7**	**8**	**9**	**10**
				Statement 1
				Statement2

Only for Reviewer Use

Mark Secured | **Remarks :**

Reviewer Signature :

SECTION - B (20 MARKS)

Can you reconstruct the below code to make a working java program that produces the output listed below ?

SL.NO	CODE
1	a.remove(2);
2	printAL(a);
3	printAL(a);
4	a.add(0,"zero"); a.add(1,"one");
5	public static void printAL(Arraylist<String> al) {
6	if (a. contains("two")) { a.add("2.2"); }
7	a.add(2,"two");
8	public static void main(String[ ] args) {
9	System.out.print(element + " "); } System.out.println(" ");
10	if(a.contains("three")) { a.add("four"); }
11	public class ArrayListMagnet {
12	if (a.indexOf("four") != 4) { a.add(4,"4.2"); }
13	}
14	}
15	import java.util.*;
16	}
17	printAL(a);
18	ArrayList<String> a = new ArrayList<String>0;
19	for(String element: a1) {
20	a.add(3,"three"); printAL(a);