

## Virtusa Technical Questions

1. What is the range of any 8 bit signed no.?

- A. 0 to 255
- B. -255 to 254
- C. -128 to 127
- D. 0 to 515

2. Consider the following statements and accordingly tell the output of these programs:

```
integer x = 34.54, y = 20, z = -5  
print ( y > 50 AND z > 10 or x > 30)
```

- A. 1
- B. -1
- C. 10
- D. 0

3. Disha designs a program which can print the product of the cubes of numbers 1 – 10 (First 10 natural numbers)

This is the program:

```
Integer x = 0 // Statement 1  
Integer sum = 0 // Statement 2  
While ( x < 10) // Statement 3  
{  
Sum = x*x*x // Statement 4  
x = x + 1 // Statement 5  
}
```

Print sum // Statement 6

Is her program totally correct? If not where does the problem lie?

- A. No error in the program
- B. Statement 1
- C. Statement 6
- D. Statement 4

4. There is a problem which inputs a number  $n$ . This problem has a unique property that given you can solve this problem for  $(n-1)$  you can easily solve it for  $n$ . Which technique would apply best in such a case?

- A. Recursion
- B. Object Oriented Programming
- C. Iteration
- D. Decision Making

5. In which area of a class are function and data directly accessible, even outside the class?

- A. Private
- B. Protected
- C. Public
- D. None

6. In programming, if a tree's depth is 3 levels determine the size of that Tree?

- A. 4
- B. 8

- C. 2
- D. 6

7. You are to add three matrices of order  $N \times N$ . What will be the time complexity?

- A.  $O(N \times N \times N)$
- B.  $O \times N$
- C.  $O \times N \times N$
- D. None

8. Determine the option which is a form of access and is commonly used in addition and removal of nodes from a dedicated queue.

- A. FIFO
- B. LIFO
- C. Both
- D. None

9.  $x = 40$

$y = 35$

$z = 20$

$w = 10$

If these are the values assigned, comment of output of these two statements.

Statement 1: `print x * y / z - w`

Statement 2: `print x * y / (z - w)`

- A. Output will change by 80
- B. Change by 160
- C. Change by 50
- D. Will remain the same

10. Choose the correct postfix notation for this infix notation:

$((A + B) * C - (D - E)) \wedge (F + G)$

A.  $AB + C * DE -- FG + \wedge$

B.  $AB + C D * E -- FG + \wedge$

C.  $A + BC * DE - FG - + \wedge$

D.  $AB + C * DE - FG - + \wedge$

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