Microsoft Technical & Coding

1.int i=~0;

uint j=(uint)i;

j++;

printf("%d",j);

The o/p is

(a)2^31

(b)0

(c)1

(d)2^32

2.num&(num-1)==0,indicates

I.num is a power of 2

II.num and (num-1) no 1\'s in common

III.n=1

(a)only I

(b)I and II

(c)I,II and III

(d)none

3.which of the following tests is not a functional testing

(a)black box testing

(b)Usability testing

(c)volume testing

(d)data validation testing

4."silly window syndrome" occurs in which of the following layer

(a)Internet layer

(b)Application layer

(c)Network layer

(d)Transport layer

5.Mr.X has a hotel with 50 floors.You are assigned as design engineer for elevator system.All the guests should not go by the stairs also they should not wait for the elevator.Suggest a design solution which is cost effective and fulfills his requirements.

6.Write a method to fill all the spaces in a string with \'%20\'

7.Write a function to print all the combinations of a string both uppercase and lowercase without altering the position of each letter.

(example "THE",the o/p should be THE,tHE,ThE,THe,thE,etc.)

8.The DELHI airport during winter season is congested with the flights due to foggy environment.The flights that are going to arrive has to wait(keep flying) for the clearance .During this the fuel may be completed.You suggest a solution for the flights and also propose a long term solution for the problem.

9.Two 32-bit integers n and m are given and positions i,j,k,l are given.Write a method to copy the contents of m from position k to l into n from position i to j.

(example n=1010000000,m=10101010,i=3,j=5,k=5,l=7..output=10\'101\'00000)

10.Give all possible test cases to test the basic features of a mobile.

11. Reverse a linked list.

12. Delete an element from a doubly linked list.

13. Write a function to find the depth of a binary tree.

14. Give a good data structure for having n queues (n not fixed) in a finite memory segment. You can have some data-structure separate for each queue. Try to use at least 90% of the memory space.

15. Do a breadth first traversal of a tree.

16. Write, efficient code for extracting unique elements from a sorted list of array. e.g. (1, 1, 3, 3, 3, 5, 5, 5, 9, 9, 9, 9) -> (1, 3, 5, 9).

17. Given an array of integers, find the contiguous sub-array with the largest sum.

18.Write a program to remove duplicates from a sorted array.

19.A version of the "There are three persons X Y Z, one of which always lies".. etc..

20. There are 3 ants at 3 corners of a triangle, they randomly start moving towards another corner.. what is the probability that they don't collide.