St. Xavier's Sr. Sec. School
Delhi-54

Class 12 | Time : 1 hr.
16-5-2015 | First Unit Test in COMPUTER SCIENCE | M. Marks : 20

1. Write the output of the following program segmen [3½]

[3½]

a)
```
#include<iostream.h>
void execute(int&x, int y=200)
{
int temp = x+y;
x+ = temp;
if(y !=200)
cout<<temp<<x<<y<<endl;
}
void main( )
{
int A=50, B=20;
execute(B);
cout<<A<<B<<endl;
execute(A, B);
cout<<A<<B<<endl;
}
```

b) [3½]
```
#include<iostream.h>
struct MyBox
{
int Length, Breadth, Height;
};
void Dimension (MyBox M)
{
cout<<M.Length<<"x "<<M.Breadth<< "x";
cout<<M.Height<<endl;
}
void main( )
{
MyBox B1={10, 15, 5}, B2, B3;
++B1.Height
Dimension(B1)
B3 = B1;
++B3.Length;
B3.Breadth++;
Dimension(B3);
B2=B3;
B2. Height+=5;
B2. Length--;
Dimension(B2);
}
```

2. Write a function CHANGE( ) in C++ which accepts an array of integer and its size as parameters and divide all those array elements by 7, which are divisible by 7 and multiply other array elements by 3. [2]

Sample Input Data of the array

A[0]	A[1]	A[2]	A[3]	A[4]
21	12	35	42	18

Content of the array after calling CHANGE( ) function

A[0]	A[1]	A[2]	A[3]	A[4]
3	36	5	6	54

3. Write a function in C++ which accepts an integer array and its size as arguments/parameters and exchanges the values of first half side elements with the second half side elements of the array. [3]
   example:- If an array of eight elements has initial content as 2, 4, 1, 6, 7, 9, 23, 10
   The function should rearrange the array as 7, 9, 23, 10, 2, 4, 1, 6.

4. An array Arr[50] [100] is stored in the memory along the row with each element occupying 2 bytes. Find out the address of the element Arr[20] [50] if the element Arr[10] [25] is stored at the address 10000. [2]

5. An array S[40][30] is stored in the memory along the column with each of the element occupying 4 bytes. Find out the base address and address of the element S[20] [15],if an element S[15][10] is stored at the memory location 7200. [2]

6. Write any two differences between the following: [4]
   I. Call by value and Call by reference
   II. Actual parameter and Formal Parameter

-x-x-x-x-x-