National University of Computer and Emerging Sciences, Lahore Campus

Object Oriented Programming (Version A)

Total Marks: 10

Section: BCS-9A

Due Date: 19th July, 2023

Name: _____

Roll Number: _____

Q1: Write the Output of the Following (5 Marks)

```cpp
#include<iostream>
using namespace std;
void function_B(int* &p, int* q)
{
        q = new int;
        *q = *p - 10;
        cout << *q << endl;
        *p = *q - 10;
        delete q;
}
void function_A(int* p, int*& q)
{
        p = new int;
        *p = *q + 20;
        cout << *p << endl;
        *q = *p + 20;
        function_B(p, q);
        delete p;
}
int main()
{
        int x = 70;
        int* ptr1 = &x;
        int* ptr2 = new int;
        *ptr2 = 80;
        cout << *ptr1 << " " << *ptr2 << endl;
        function_A(ptr1, ptr2);
        cout << *ptr1 << " " << *ptr2 << endl;
        function_B(ptr1, ptr2);
        cout << *ptr1 << " " << *ptr2;
        delete ptr2;
        return 0;
}
```

Output:

Q2: Write the Output of the Following: (5 Marks)

```cpp
#include<iostream>
using namespace std;
void fun(int* a, int* b, int m, int n)
{
    int i = 0, j = 0;
    cout << "Output" << endl;
    while (i < m && j < n)
    {
        if (*(a+i) < *(b+j))
            i++;
        else if (*(a+i) > *(b+j))
            j++;
        else
        {
            cout << *(a+i++) << " ";
            j++;
        }
    }
}
int main()
{
    int m, i, j, n, *a, *b;
    m = 5;
    n = 3;
    a = new int[m] {1, 3, 4, 5, 6};
    b = new int[n] {1, 2, 3};
    fun(a, b, m, n);
    return 0;
}
```