Name		**A**
Roll No.		Dept.		Section	

Instructions:
1. This question paper contains a total of **1** page (**1** side of paper).
2. Write your name, roll number, department, and section on every side of every sheet of this booklet
3. Write final answers neatly with a blue/black pen in the given boxes.
4. **Answers written outside the box will NOT be graded.**

Total **10 Marks**

Q. 1: Write the output of the following program in the appropriate box and answer the question. (2+2+2 = 6 Marks)

```
1    #include<stdio.h>
2    void func1(int *arr){
3         for(int i=1; i<=3;i++)
4         (i-1)[arr] = (i%3);
5    }
6    void func2 (int a[1] , int arr){
7         a[0] = arr + 1;
8    }
9    int main(){
10     int arr[4] = {0,0,0,0};
11     func1(arr+1);
12     for(int i=0; i<4; i++)
13         printf("%d ", i[arr] );
14     printf("\n");
15     func2(arr, *arr);
16     for(int i=0; i<4; i++)
17         printf("%d ", i[arr] );
18     return 0;
19   }
```

Output
0 1 2 0
1 1 2 0

Will the answer change if we write func2 as:

```
void func2 (int a[1] , int arr){
  int temp = arr + 1;
  a = &temp;
}
```
Explain your answer

If the response is yes/will provide segmentation fault, award 1 mark, if the explanation is correct too (segmentation error happens since a[1] is unpredictable) award 1 mark

Q. 2: Write the output of the following sequence of instructions `long arr2[100];`
`int arr1[100], a1=(&arr2[50]), a2=(&arr2[10]), b1=(&arr1[50]), b2=(&arr1[10]);`
`printf("%d %d", a1-a2 , b1-b2);` Explain your answer. (2+2 Marks)

320 160
Subtraction is of the addresses and they will count the shift of one address position in the array as one.