

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

Output

**1 1 2 3 0****3 1 2 3 0**

Will the answer change if we write func2 as:

```

void func2 (int a[1] , int arr){
    int temp = arr + 2;
    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[60];`

`int arr1[50], a1=(&arr2[40]), a2=(&arr2[30]), b1=(&arr1[40]), b2=(&arr1[30]);`

`printf("%d %d", a1-a2 , b1-b2);` Explain your answer.

(2+2 Marks)

**80 40**

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