Class Test

[SOA Deemed to be University, ITER]

Subject : PPWC (CSE-3544)

Date : 07/11/2024 Total : 15 Marks Time: 1hr.

Q1.

A. Develop a C program to intersperse the elements of two integer arrays into another array. Assume that **array1 is 5,7,4,5,8** and **array2 is 12,16,20,19,14**. The **resultant arra**y will be **5,12,7,16,4,20,5,19,8,14.** Display all the arrays.

B. Given the string **pres** with the value **"Edison, Thomas Alva"** and two 40-character temporary variables, tmp1 and tmp2, what string is displayed by the following code fragment?

```
strncpy(tmp1, &pres[8], 5);
tmp1[5] = '\0';
strlwr(tmp1);
strrev(tmp1);
strncpy(tmp2, &pres[14], 4);
```

```
tmp2[4] = '\0';
strcat(tmp1, " ");
strcat(tmp1, tmp2);
printf("%s\n", tmp1);
```

C. Design a program to find the difference between two sets or arrays. The difference between two sets or arrays: All the elements of the first array that don't appear in the second array. If **array p** has the elements { 1, 2, 3, 4} and **array q** has the elements {2, 4, 5, 6 }, then the difference between the two arrays, **p-q will be {1, 3 }**.

Q2.

A. Construct a program to find the occurrence of the first repetitive character in a string. **For example**, let the string **racecar**, the program

should give the output as The first repetitive character in the string **racecar is c**.

B. Trace the recursive function showing its parameter at each call for the following parameter at each call for the below code segment with its output.

```
void fun(int n)
{
  if(n>0) {
     fun(n-1);
     printf("%d",n);
     fun(n-1);
}
```

```
int main()
{
  fun(4);
  return 0;
}
```

C. Determine the expected display values at the printf statements for the given program segment.

```
int main() {
    int m1;
    int a = 10, b = 20, c = 30;
    m1 = a > b ? a : c > a ? c : b;
    display(m1);
    print("m1=%d\n", m1);
    return 0;
}

void display(int m1) {
    int n = 20;
    if (m1 == n) {
        print("%d\n", m1 >> 2);
    } else {
        print("%d\n", m1 * n);
    }
}
```

```
int main() {
  int a[4][5] = {
     {0, 9, 1, 7, 0},
     {6, 7, 8, 9, 10},
     {11, 12, 13, 14, 15},
     {22, 24, 26, 28, 30}
  };
  printf("%d%d" *(*(a+1)+3), a[2][2]);
  printf("%d%d" *(*(a+**a+2)+3), a[1+2][2*2]);
```

D. Write a C program to find the index of the minimum element in an array of 10 integers without using built-in functions. The prototype of the function to be used in your program is given as **int findMinIndex(int *, int);**