

Reg. No.					

DEPARTMENT OF SCIENCES, I SEMESTER M.Sc (Applied Mathematics and Computing)) END SEMESTER EXAMINATIONS, November 2019 Subject [C-Programming-MAT 4109]

(REVISED CREDIT SYSTEM-2017)

Time: 3 Hours	Date: 23.	11.2019	MAX. MARKS: 50
Note: (i) Answer all	FIVE FULL questions	(ii) All questions ca	arry equal marks (4+3+3)

(a) Write a program to find roots of a quadratic equation ax² + bx + c = 0 with non zero coefficients a, b, c. Print whether the roots are real or complex.
 (b) Write a program to read the name, roll number and total marks of a list of students and sort the list in descending order of the marks and display it using structures.

(c) Write a program to search an element in an one dimensional array using Linear Search technique and Pointers.

- 2. (a) Write a program to find sum of series of the form $\frac{1.2}{3} + \frac{2.3}{4} + \dots + \frac{n.(n+1)}{n+2}$ upto *n* terms.
 - (b) Explain identifiers with an example. What are the rules to be followed while constructing a valid identifier?
 - (c) Write a program to count the number of words in a given sentence.
- 3. (a) Write a program to find all prime numbers between two entered limits using function.
 - (b) With syntax and examples, explain *static, register* and *extern*.

```
(c) Write the output of the following program segment
```

- 4. (a) Write a program to multiply two entered matrices.
 - (b) Write a program to delete an element from an appropriate position of the array.
 - (c) Write the output of the following program segment;

```
#include<stdio.h>
#include<string.h>
main()
{
    char a[] = "Malayalam", b[] = "Manipal";
    int i, j, k, l;
    i = strcmp(a, b);
    j = stricmp(b, "MADAM");
    k = strnicmp(a, b, 3);
    l = strcmp(b, "man kind");
    printf("%d %d %d %d %d", i, j, k, l);
}
```

5. (a) Write the output of the following program segment;#include <stdio.h>

```
main()
{
int a= 3, b = 5, x = 63, y, z;
y = x >> a;
z = x << b;
printf("y = \%d \ z = \%d.", y, z);
}
```

(b) Write a program to find factorial of an entered number using recursion.

(c) Design a flow chart and algorithm to find the sum of all even numbers between 1 and N.
