Entry No: 2 3 B C S 0 3 5

Date: 22.12.23

Total Number of Pages: [01]
Total Number of Questions: [07]

Course Title: Introduction to C Programming
Course Code: CSL 1022

Time Allowed: 3.0 Hours

Max Marks: [50]

Q1. Answer the following questions:

a. What are preprocessor directives and why do we use them?
b. What are storage classes? Name them and their purpose.
c. Write a for loop to print numbers from 10 to 1.
d. Can addresses and values be stored in the same array? Justify. Differentiate between character array and integer array.

(3 Marks each =12 Marks)

Q2. Explain in detail with the help of suitable examples:

a. Structure and Union
b. Macros and Functions
c. Typecast and Typedef

(4 Marks Each = 12 Marks)

Q3. Write an **algorithm and develop a C program** to reverse an integer number NUM and check whether it is PALINDROME or NOT.

(5 Marks)

Q4. Write a **Menu driven program** to calculate surface area and volume of a Sphere using call by reference. *Values must be printed in the main program.*

(5 Marks)

Q5 Write **a program** to generate the series

```
ABCDEFGFEDCBA          2×n-1
ABCDEF FEDCBA
ABCDE...EDCBA
ABCD      DCBA
ABC        CBA
AB          BA
A            A
```

(5 Marks)

Q6. a. Write a short note on two Dimensional character arrays. How they are passed to a function
b. Write a program to multiply two matrices.

(4 + 3 = 7 Marks)

Q7. Write a program to create record of student using the structure **RECORD** with Name, Entry No., Address and Marks in three subjects. Enter the details of the student in the main program and using the function PRINT print the details of the student in the function using call by reference.

(4 Marks)

(1, 3, 5, 7)