1078
B.E. (Civil Engineering)
First Semester
CS-101: Programming Fundamentals
(Common with CSE)

Time allowed: 3 Hours   Max. Marks: 50

NOTE: *Attempt* <u>*five*</u> *questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.*

x-x-x

I.   Attempt the following:-

a) What are the advantages of unions over structures?

b) What are advantages and disadvantages of recursion?

c) Explain how gets () function is different from getch()?

d) What will be the output of following C Program?

        int a=5,b,c;

        $b=++a;$

        $c=a++;$

    printf("%d %d %d \n". a,b,c);

e) What is meant by pass by reference parameter?

f) What is difference between type-casting and type conversion?

g) What are Macros?

h) Write a C program for the following expression:

    m = k++ + ++k where k = 30.

    What will be final value ofm?

i) What is a dangling pointer?

j) What are self referential structures?   (10x1)

UNIT – I

II.   a) Differentiate between structure and an array. How you can declare an array of structures? Give an example.   (2,4)

b) Explain how the structure variable is passed as a parameter to a function with example.   (4)

P.T.O.

III. a) Write a C program to find sum of the diagonal elements of a matrix.

b) Explain the difference between Call by Value and Call by reference with example

(5,5)

IV. a) Write a C Program to sort n names alphabetically.

b) Write a C Program to concatenate two strings.

(5,5)

UNIT – II

V. a) List and explain various Pre-processor directives supported in C language.

b) What are Pointers? Write a C program to count the number of words in a string using Pointers.

(5,5)

VI. a) Write a C program which reads input from a file named "program 1.c" to count number of characters and words of the file.

b) Explain how error handling is done in C with examples.

(5,5)

VII. a) Write a C Program to copy the contents of one file to another.

b) Write short note on formatted input and output.

(5,5)

x-x-x