[Total No. of Questions: 09]   [Total No. of Pages: 2]

Uni. Roll No. …………….

Program: B.Tech

Semester: 2nd

15-07-21(M)

Name of Subject: Programming for Problem Solving

Subject Code: ESC-104

Paper ID: 15935

Time Allowed: 02 Hours   **Max. Marks: 60**

NOTE:

1) Each question is of 10 marks.
2) Attempt any six questions out of nine
3) Any missing data may be assumed appropriately

Q1. Draw and explain different components of computer system with block diagram.

Q2. Explain the various control structures available in C programming language with example.

Q3. Discuss array. Differentiate between 1-D and 2-D array. Write a program in C for subtraction of two Matrices of same size.

Q4. Sort the given array using Insertion Sort, Bubble Sort and Selection Sort

    a. Insertion Sort – 14 33 27 10 35 19 42 44

    b. Bubble Sort - 5 1 4 2 8

    c. Selection Sort - 64 25 12 22 11

Q5. Discuss User Defined Functions and also define Call by value and Call by reference using suitable example

Q6. How Recursive function is different from non-Recursive function? Write a program to generate Fibonacci Series using Recursion.

Q7. Write a short note on

    a. Structure and Array of Structures

    b. Library Functions

    c. Logical Operators

    d. Difference between Compiler and Interpreter

    e. Difference between printf() and puts()

Q8. Illustrate the concept of **Break** and **Continue** statement with suitable example. Also explain different ways to calling a function in C language

Q9. Difference between while and do-while loop, also write down a syntax for '**FOR**' loop. Write a program to make such a pattern like right angle triangle with number increased by 1

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1
2 3
4 5 6
7 8 9 10
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