Code: 20ES1401

II B.Tech - II Semester – Regular Examinations – JULY 2022

PROGRAMMING WITH C
(ELECTRICAL & ELECTRONICS ENGINEERING)

Duration: 3 hours   Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.
2. All parts of Question must be answered in one place.

UNIT – I

1. a) Explain about type casting with examples.   7 M
    b) Develop C Program to illustrate if-else-if statement.   7 M

                                OR

2. a) Explain about type conversion with examples.   7 M
    b) Develop a program to perform arithmetic operations by using switch-case statement.   7 M

UNIT – II

3. a) Develop a C program to illustrate Break statement.   7 M
    b) Develop a C program to add two matrices.   7 M

                                OR

4. a) Develop a C program to illustrate Continue statement.   7 M
    b) Develop a C program to multiply two matrices.   7 M

UNIT-III

5. a) Develop a C function to check whether the given number is Armstrong or not.
    Note: A number is thought of an Armstrong number if   7 M

the sum of its own digits raised to the power number of digits gives the number itself.

Example 1 : $153=1^3+5^3+3^3$

Example 2 : $1634=1^4+6^4+3^4+4^4$

b) Distinguish all storage classes used in C language.   7 M

<div align="center">OR</div>

6. a) Develop a C function to print Fibonacci series.
    Note : The series is said to be Fibonacci series in which each number is the sum of the two preceding ones.
    Example : 0,1,1,2,3,5,8,13,21,34,…..   7 M

    b) Distinguish Call by Value and Call by reference with an example.   7 M

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UNIT – IV

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7. a) Explain Declaration and Initialization of a Pointer with examples.   7 M

    b) Develop a program to display the contents of an array by using dynamic memory allocation.   7 M

<div align="center">OR</div>

8. a) Explain Macros with an example.   7 M

    b) Develop a C program to illustrate Array of Pointers.   7 M

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UNIT – V

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9. a) Develop a C program to create bank structure with the following
    fields: bank_name, acc_no and balance. Read and display five records using array of structures.   7 M

    b) Classify file opening modes with syntax and example.   7 M

<div align="center">OR</div>

10. a) Structures and Unions are user defined data types. But there exists certain differences between these two data types. Differentiate between structures and unions.   7 M

   b) Create two structures for the following scenario:
   (i) A College contains the following fields: clg_code, clg_name, year_of_establish, num_of_courses.
   (ii)An employee with id, name, department and salary.   7 M