DIPLOMA IN ELECTRONICS AND COMMUNICATION ENGINEERING

CENTRALIZED QUESTION BANK

1040234540- PROGRAMMING IN C

DIRECTORATE OF TECHNICAL

EDUCATION GOVERNMENT OF

TAMILNADU

DIPLOMA END SEMESTER / YEAR EXAMINATION – 2025

Course: Electronics and Communication Engineering

Subject : Programming in C   **QP Code :**1040234540

Time : 3 Hours   **Date :**   **Session:**   **Max Marks:**100

Answer the following Questions

1   Write and execute a C Program to convert a given temperature in degree Celsius to Fahrenheit.
2   Implement the conversion of degree Celsius to Fahrenheit using a C program.
3   Convert 37 degree Celsius to Fahrenheit using a C program and execute the code.
4   Write and execute a C program to implement Ohm's law.
5   Execute the Ohm's Law equation **V = R x I** using a C program.
6   Using C Programming, implement the concept of Ohm's law ($V = I\ x\ R$).
7   Write and execute a C program to calculate the equivalent resistance of **THREE** resistors connected in series.
8   Find the equivalent resistance of three resistorsconnected in series using a C program and execute the code.
9   Let R1, R2, and R3 be three resistances connected in series. Calculate the equivalent resistance using a C program and execute the code.
10   Write and execute a C program to calculate the equivalent capacitance of **THREE** capacitors connected in series.
11   Find the equivalent capacitance of three capacitors connected in series using a C program and execute the code.
12   Let C1, C2, and C3 be three capacitances connected in series. Calculate the equivalent capacitance using a C program and execute the code.
13   Write and execute a C Program to find whether the given integer is even or odd.
14   Find whether the given integer is odd or even using a C program and execute the code.
15   Using a C program, show that a given integer number is odd or even and execute the code.
16   Write and execute a C Program to find whether the given number is positive or negative or zero.
17   Find whether the given number is a positive integer or negative integer or zero using a C program and execute the code.
18   Using a C program, show that a given integer number is positive, negative or zero and execute the code.
19   Write and execute a C Program to perform various arithmetic operations using switch-case statement.
20   Implement the basic arithmetic operations (Addition, Subtraction, Multiplication and Division) using Switch-Case statement in "C".
21   Using Switch-Case statement in "C" programming, implement the basic arithmetic operations (Addition, Subtraction, Multiplication and Division).
22   Write and Execute a C Program to find the sum of first ten natural numbers using "while" loop.
23   Using "while" loop, implement a "C" program to find the sum of first ten natural numbers.
24   Find the sum of first 10 natural numbers using "while" loop in C programming and execute the code.
25   Write and Execute a C Program to print a pyramid star pattern (an equilateral triangle) using "for" loop.

26   Using "for" loop in C programming, display a pyramid star pattern (an equilateral triangle).

27   Implement a pyramid star pattern (an equilateral triangle) using "for" loop in C programming.

28   Write and execute a C program to find the sum of elements in an 1D array.

29   Given an 1-Dimensional integer array of size "n". Find the sum of elements in the 1-D array using a C program and execute the code.

30   Implement a C program to find the sum of elements in an 1-Dimensional array of size "n".

31   Write and execute a C program to check whether the given string is a palindrome using string handling functions.

32   Using string handling functions in "C", check whether an entered string is a palindrome or not and execute the code.

33   Given a string "MADAM". Check if it is a palindrome or not using string handling functions in "C" and execute the code.

34   Write and execute a C Program to store a simple 2D array of four elements (2x2) and print each element using "for" loop.

35   Using a C program, store a simple 2-Dimensional array of four elements (2x2) and display each element using "for" loop.

36   Implement a C Program to store a simple 2D array of four elements (2x2) and display each element using "for" loop.

37   Write and execute a C program to calculate the resonant frequency of an RLC series circuit using sqrt( ) function.

38   Using sqrt( ) function in C programming, calculate the resonant frequency of a series RLC circuit.

39   Given Resistance (R), Inductance (L), and Capacitance (C) connected as a series RLC circuit. Calculate the resonant frequency using sqrt( ) function in C programming.

40   Write and execute a C program to prepare the total mark of each student by reading their "*Name, Reg.No, Marks for four subjects*" (for a class of five students) using array of structure.

41   Using array of structure in "C", prepare the total mark of each student by reading their "*Name, Reg.No, Marks for four subjects*" (for a class of five students) and execute the code.

42   Implement a C program to prepare the total mark of each student by reading their "*Name, Reg.No, Marks for four subjects*" (for a class of five students) using array of structure.

43   Write and execute a C program to find the factorial of a given number "N" using an user-defined function.

44   Using a C program, find the "N!" (Factorial of N) using a user-defined function and execute the code.

45   Given a positive integer N. Implement a C program to find the "N!" (Factorial of N) using a user-defined function.

Allocation of Marks

Sl.No	Description	Marks
1	Aim	5
2	Flowchart/ Algorithm	20
3	Program	25
4	Execution & Result	10
5	Written Test	30
6	Viva Voce	10
	Total Marks	**100**