Reg. No. : | | | | | | | | | | | | |

Question Paper Code: R4710

B.E./B.Tech. DEGREE EXAMINATION, NOV 2025

Fourth Semester

Mechanical Engineering

R21UME410 - C PROGRAMMING FOR MECHANICAL ENGINEERS

(Regulations R2021)

Duration: Three hours | Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1.	List the Types of Tokens in C?	CO1- U
2.	Draw a flow chart to find the biggest of two numbers?	CO2-App
3.	Write the syntax for SWITCH statement.	CO1-U
4.	Draw the flowchart to implement nested if condition.	CO3-App
5.	What is an array? Write the types of an array?	CO1- U
6.	Write a C program to get a string and print the string.	CO4-App
7.	Write a C program to explain the working of function with a return type.	CO4-App
8.	Define functions.	CO1- U
9.	What is the use of C programming in manufacturing automation?	CO2-App
10.	Write a simple C statement to calculate the material removal rate (MRR) in a turning process.	CO2-App

PART – B (5 x 16= 80 Marks)

11.	(a)	Explain the basic structure of a C program with an example. Describe the different sections of a C program	CO1- U	(16)
		Or		
	(b)	What is a flowchart**?** Explain different flowchart symbols and draw a flowchart for finding the largest of three numbers.	CO1- U	(16)

12.	(a)	Write a C program to check whether a given number is even or odd.	CO3-App	(16)
		Or		
	(b)	Write a C program for Calculating the Factorial of a Number using a while Loop	CO3-App	(16)
13.	(a)	Write a C program for Matrix addition using 2D-Array.	CO4-App	(16)
		Or		
	(b)	Write a C program to calculate the sum of digits of a number using recursion**.**	CO4-App	(16)
14.	(a)	Write a C program to reverse a given string using pointers.	CO4-App	(16)
		Or		
	(b)	Write a C program to store and display details of a book (title, author, price) using structures.	CO4-App	(16)
15.	(a)	Write a C program that accepts velocity, density, and viscosity as input and determines whether the flow is laminar or turbulent using Reynolds number.	CO2-App	(16)
		Or		
	(b)	Write a C program to compute the Reynolds number to determine the type of flow in a pipe.	CO2-App	(16)