Laboratory Schedule:

Session No	**Topics:** Programming Assignments	No. of hours
1.	**Creating and Running Simple C Programs:** • C-Program to calculate the sum of three numbers / C-Program to demonstrate a Simple Calculator. • C-Program to calculate the area and circumference of a circle using PI as a defined constant. • C-Program to convert temperature given in Celsius to Fahrenheit and Fahrenheit to Celsius • C-Program to compute the roots of a quadratic equation by accepting the coefficients.	**2hr**
2.	**Creating and Running C Programs on Expressions :** • C-Program to calculate quotient and reminder of two numbers. (Page: 125) • C-Program to evaluate two complex expressions. (Page:113) • C-Program to demonstrate automatic and type casting of numeric types(Page: 117 and 119) • C-Program to calculate the total sales given the unit price, quantity, discount and tax rate(Page: 130) • C-Program to calculate a student's average score for a course with 4 quizzes, 2 midterms and a final. The quizzes are weighted 30%, the midterms 40% and the final 30%. (Page: 131)	**2hr**
3.	**Creating and Running C Programs on Making Decision:** • C-Program to determine the use of the character classification functions found in c-type library. (Page:267) • C-Program to read a test score, calculate the grade for the score and print the grade. (Page: 259) • C-Program to uses a menu to allow the user to add, multiply, subtract and divide two numbers using switch case. (Page: 277) • C-Program to read the name of the user, number of units consumed and print out the charges. An electricity board charges the following rates for the use of electricity: ◦ For the first 200 units 80 paise per unit ◦ For the next 100 units 90 paise per unit ◦ Beyond 300 units Rs 1 per unit. All users are charged a minimum of Rs. 100 as meter charge.If the total amount is more than Rs 400, then an additional surcharge of 15% of total amount is charged.	**2hr**
4.	**Creating and Running C Programs on Repetition or Loops:**	**2hr**

	• C-Program to print a number series from 1 to a user-specified limit in the form of a right triangle (Page: 328) • C-Program to print the number and sum of digits in an integer. (Page:332) • C-Program to calculate the factorial of a number using for loop/ Recursion(Page:351) • C-Program to calculate nth Fibonacci number. (Page:355) • C-Program to convert binary to a decimal number(Page: 335)	
5.	**Creating and Running C Programs on One Dimensional Arrays:** • C-Program to print square of index and print it. (Page:471) • C-Program to calculate average of the number in an array. (Page:477) • C-Program to sort the list using bubble sort. (Page:495) • C-Program to search an ordered list using binary search. (Page:508)	**2hr**
6.	**Creating and Running C Programs on Two Dimensional Arrays:** • C-Program to perform addition of two matrices. • C-Program to perform multiplication of two matrices. • C-Program to find transpose of the given matrices. • C-Program to find row sum and column sum and sum of all elements in a matrix. • C-Program initialize/fill all the diagonal elements of a matrix with zero and print.	**2hr**
7.	**Creating and Running C Programs on User Defined Functions:** • C-program to read a number, Find its factorial using function with argument and with return type. • C-Program to read two number, Find its GCD and LCM using function with arguments and without return type. • C-Program to read a number, Find whether it is a palindrome or not using function without argument and with return type. • C-Program to read a number, Find whether it is prime number or not using function without arguments and without return type.	**2hr**
8.	**Creating and Running C Programs on Strings:** • C-program read two strings, Combine them without using string built-in functions. • C-program read two strings, Compare them without using string built-in functions. • C-program read two strings, concatenate them without using string built-in functions. • C Program to Check if the Substring is Present in the Given String. • C-program to demonstrate built-in sting functions like strlen(), strcpy(), strcmp(), strcat().	**2hr**

9.	**Creating and Running C Programs on Storage Classes and Pointers:** • C-program to show the use of auto and static variable. (Page:1108) • C-program to add two numbers using pointers. / C-program to swap two numbers using pointers. • C-program to show how the same pointer can point to different data variable. (Page:571)/ C-program to show the use of different pointers point to the same variable (Page:572) • C-Program to read an array of elements, Compute its sum using pointers.	**2hr**
10.	**Creating and Running C Programs on Derived Types and and Unions:** • C-Program to print selected TV stations for our cable TV systems.(Page: 751) • C-Program to demonstrate union of short int and two char(Page:783)	**2hr**
11.	**Creating and Running C Programs on Structures:** • C Program to read employee details (name, salary, address) and print the same using structure. • C-Program to read marks of three students in 3 subjects. Calculate the total marks scored, student wise and subject wise using structure.	**2hr**
12.	**Creating and Running C Programs on Files:** • C-Program to demonstrate function fread()/fscanf() • C-Program to demonstrate function fwrite()/fprintf()	**2hr**