

Vishwakarma Government Engineering College, Chandkheda
Laboratory Work (IT Department)
Programming for Problem Solving (3110003)

Sr. No	Practical	Date	Marks	Sign
Practical Set-1				
1	Write a C program that performs as calculator (addition, multiplication, division, subtraction).			
2	Write a C program to find area of triangle ($a=h*b*.5$), a = area, h = height, b = base			
3	Write a C program to calculate simple interest ($i = (p*r*n)/100$) i = Simple interest, p = Principal amount r = Rate of interest, n = Number of years			
4	Write a C program to interchange two numbers.			
5	Write a C program to enter a distance in to kilometer and convert it in to meter, feet, inches and centimeter.			
6	Write a C program to compute Fahrenheit from centigrade ($f=1.8*c +32$).			
7	Write a C program to find out distance travelled by the equation $d = ut + at^2$.			
Practical Set-2				
8	Write a C program to find that the accepted number is Negative, Positive or Zero.			
9	Write a C program to read marks of a student from keyboard and check whether the student is pass (marks more than 40) or fail (using if else).			
10	Write a C program to read three numbers from keyboard and find out maximum out of these three. (nested if else)			
11	Write a C program to check whether the entered character is capital, small letter, digit or any special character.			
12	Write a C program to read marks from keyboard and your program should display equivalent grade according to following range (using else..if ladder) 100 - 80 Distinction, 79 - 60 First Class, 59 - 40 Second Class, < 40 Fail.			
13	Write a C program to prepare pay slip using following data. Da = 10% of basic, Hra = 7.50% of basic, Ma = 300, Pf = 12.50% of basic, Gross = basic + Da + Hra + Ma, Nt = Gross – Pf.			
14	Write a C program to read no 1 to 7 and print relatively day Sunday to Saturday.			
15	Write a C program to input an integer number and check the last digit of number is even or odd.			
Practical Set-3				
16	Write a C program to find out the Maximum and Minimum number from given 10 Numbers.			
17	Write a C program to find factorial of a given number.			
18	Write a C program to reverse a number.			
19	Write a C program to generate first n number of Fibonacci series			
20	Write a C program to find out sum of first and last digit of a given number.			
21	Write a C program to find the sum and average of different numbers which are accepted by user as many as user wants.			
22	Write a C program to calculate average and total of 5 students for 3 subjects (use nested for loops)			
23	Read five persons height and weight and count the number of person having height greater than 170 and weight less than 50,			

Practical Set-4				
24	Write a C program to check whether the given number is prime or not.			
25	Write a C program to evaluate the series $1^2+2^2+3^2+.....+n^2$			
26	Write a C program to find $1+1/2+1/3+1/4+....+1/n$.			
27	Write a C program to find $1+1/2!+1/3!+1/4!+.....+1/n!$.			
28	Write a C program to evaluate the series $sum=1-x+x^2/2!-x^3/3!+x^4/4!...-x^9/9!$			
Practical Set-5				
29	Write a C program to print following patterns : i * ii * iii ***** * * * * ***** * * * * * * *** * * * * * * * * ** * * * * * * * * * * *			
30	Write a C program to print following patterns : i 1 ii 12345 iii 55555 iv 1 12 1234 4444 22 123 123 333 333 1234 12 22 4444 12345 1 1 55555			
31	Write a C program to print following patterns: i AAAAA ii ABCDE BBBB ABCD CCC ABC DD AB E A			
Practical Set-6				
32	Write a C program to read and store the rollNo and marks of 20 students using array.			
33	Write a C program to find out which number is even or odd from list of 10 numbers using array			
34	Write a program to find maximum element from 1-Dimensional array.			
35	Write a C program to calculate the average, geometric and harmonic mean of n elements in an array.			
36	Write a C program to sort given array in ascending order.			
Practical Set-7				
37	Write a C program to find a character from given string.			
38	Write a C program to replace a character in given string.			
39	Write a C program to delete a character in given string.			
40	Write a C program to reverse string.			
41	Write a C program to convert string into upper case.			
Practical Set-8				
42	Write a C program that defines a function to add first n numbers.			
43	Write C functions which return 1 if number is prime otherwise returns 0.			
44	Write a C function to interchange the values of two variables, say x and y.			
45	Write a C program to use recursive calls to evaluate $F(x) = x - x^3/3! + x^5/5! - x^7/7! +... x^n/n!$			
46	Write a C program to find factorial of a number using recursion.			
47	Write a C program which demonstrates the use of global and static variable.			
48	Write a C function in which string will be passed as an argument and convert all lowercase character into their uppercase equivalents.			

Practical Set-9			
49	Write a C program to read structure elements from keyboard.		
50	Define a structure named “personal” that would contain person name, date of joining and salary. Use this structure to read this information of 5 people and print the same on screen.		
51	Define structure called time_struct containing three members integer hour, integer minute and integer second. Develop a program that would assign values to the individual number and display the time in the following format: 16: 40:51		
52	Define a structure called cricket that will describe the following information: Player name, Team name, Batting average. Using cricket, read the information about 5 players and print list containing names of players with their batting average.		
53	Design a structure student_record to contain name, branch and total marks obtained. Develop a program to read data for 5 students in a class and print them.		
Practical Set-10			
54	Write a C program to print address of variable using pointer and access elements using pointer.		
55	Write a C program to swap the two values using pointers.		
56	Write a C program to print the address of character and the character of string using pointer.		
57	Write a C program to access array using pointer.		
58	Write a C program for sorting using pointer.		
59	Write a C program to write a string in file.		
60	A file named data contains series of integer numbers. Write a C program to read all numbers from file and then write all odd numbers into file named “odd” and write all even numbers into file named “even”. Display all the contents of these files on screen.		