**Programming Fundamentals using C Lab**

**Dept-CS Sem-[[1]](#footnote-1)st**

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| **C Program – Basic** | | **page** | **Remarks** |
| **1.** | **Write a c program to print the sum of two numbers where the numbers will be given by the user.** |  |  |
| **2.** | **Write a c program to swap two numbers using third variable or without third variable** |  |  |
| **3.** | **Write a c program to find the size of int, float, double, and char** |  |  |
| **4.** | **Write a c program to print the ASCII value of a character** |  |  |
| **Control Flow and Loop** | |  |  |
| **5.** | **Write a c program to check whether a given number is even or odd.** |  |  |
| **6.** | **Write a c program to find largest number among three numbers using ternary operator and smallest among them using nested if-else.** |  |  |
| **7.** | **Write a c program to check leap year of a given year.** |  |  |
| **8.** | **Write a c program to make a simple calculator.** |  |  |
| **9.** | **Write a c program to check whether a given number is prime or not** |  |  |
| **10.** | **Write a c program to calculate the sum of n natural numbers. The inputs will be provided by the user.** |  |  |
| **11.** | **Write a c program to find factorial of a given number.** |  |  |
| **12.** | **Write a c program to reverse a given number.** |  |  |
| **13.** | **Write a c program to print the day of 1st January of any year inputted by the user, considering the first January of 1900 is Monday.** |  |  |
| **14.** | **Write a c program to display Armstrong numbers between 1 to 1000** |  |  |
| **15.** | **Write a C program to check a given number is palindrome or not.** |  |  |
| **16.** | **Write a C program to print the following pattern for n number of lines where n will be given by the user:**  **\***  **\* \***  **\* \* \***  **\* \* \* \*** |  |  |
| **17.** | **Write a C program to print the following pattern for n number of lines where n will be given by the user:**  **\***  **\* \***  **\* \* \***  **\* \* \* \*** |  |  |
| **18.** | **Write a C program to print the following pattern for n number of lines where n will be given by the user:**  **2**  **4 6**  **12 14 16**  **32 34 36 38** |  |  |
| **19.** | **Write a C program to print the following pattern for n number of lines where n will be given by the user:**  **1**  **23**  **456**  **78910** |  |  |
| **Functions and pointers** | |  |  |
| **20.** | **Write a C program to find out the area and perimeter of a rectangle using two different functions.** |  |  |

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| **21.** | **Write a C Program to find the cube and square root of a number using two different functions without using the standard math library functions.** |  |  |
| **22.** | **Write a C program to calculate simple interest using function. The amount, rate of interest and number of year’s term will be given by the user.** |  |  |
| **23.** | **Write a C program to swap two numbers using call by reference** |  |  |
| **Arrays & String** | |  |  |
| **24.** | **Write a c Program to search a particular element in an Array.** |  |  |
| **25.** | **Write a c Program to Find the Maximum and Minimum in an Array.** |  |  |
| **26.** | **Write a c program to get n number of integers from the user and store them in an array. Now, do the addition and the multiplication of the entire array element and show the results. 0<n<100** |  |  |
| **27.** | **Write a c program to multiply two matrices** |  |  |
| **28.** | **Write a c program to create a square matrix of size m dynamically. Value of m will be provided by the user. Calculate the sum of all the left diagonal elements of the sum of all the right diagonal elements of the matrix. Print the two sums.** |  |  |
| **29.** | **Write a c program to find the length of a string without strlen() function** |  |  |
| **30.** | **Write a c program to compare two strings lexicographically** |  |  |
| **31.** | **Write a c program to reverse a string without the library function.** |  |  |
| **Structures and Unions** | |  |  |
| **32.** | **Write a c program to create your data type to store data of 10 books and print the data in proper format.** |  |  |
| **33.** | **Write a c program to store student records as structures and sort them by age or roll number.** |  |  |
| **File and Command line Arguments** | |  |  |
| **34.** | **Write a c program to copy one file into another file where the file names will be provided through command line. The input will be like: mycopy<source file><destination file>** |  |  |
| **35.** | **Write a c program to read and write stored student record into a file.** |  |  |

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