

ITMANIA 2023

A State Level IT Competitions

Associated with IT Industries and Alumni Association

Organized by

SRIMCA & BVPICS in association with

Lynx Softech and Ciphernutz IT Services on 28th Jan '23.

Event Name: Code Mania

Duration: 75 Minutes

Max. Marks: 100.

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Consider C, C++ and Java language to solve the given problems.

Q-1 Write a program to find the median of the array obtained after merging the A and B [25 Marks]
arrays. Suppose that 2 sorted arrays A and B of size n each. Input must be taken from the user.

Sample Input:

A = [1, 12, 15, 26, 38]

B = [2, 13, 19, 30, 45]

Sample Output: 17

Q-2 Write a program to find the number occurring odd number of times from the array. For [25 Marks]
array values can be taken from the user.

Sample Input: A = {1, 2, 3, 2, 3, 1, 3}

Sample Output: 3

Q-3 Write a program to find a peak element from an array which is **not smaller** than its [25 Marks]
neighbours.

Sample Input: A[] = {10, 20, 15, 2, 23, 90, 67}

Sample Output: 20, 90

Q-4 Write a program to find all Armstrong number in the given range of 100 and 999. (An [25 Marks]
Armstrong number of three digits is an integer such that the sum of the cubes of its digits is equal to the number itself.) For example, 371 is an Armstrong number since $3^3 + 7^3 + 1^3 = 371$.

-----All the very Best-----