

## Set B

### Lab Final Section C (2<sup>nd</sup> 30)

Total Marks: 25, Time: 50 minutes

(Answer any 5)

1. Steve and Robin are arguing over which number is lucky for them, odd or even. They decided to toss. They are taking input from random people. If the random number is even, then even is lucky for them. Write a program that will read an integer and print whether it is odd or even.	5										
2. Missy hates to solve math problem. So, her mother gives her a condition. The condition is if she solves 1 problem, she will get 1 chocolate. if she solves 2 math, she will get 3 chocolates. If she solves 3 math problems, she will get 6 chocolates and so on.  How many chocolates will she get if she solves N problems? Use user-defined function named "Add" for that. <b>Input</b> The input will contain a single integer N ( $0 \leq N \leq 12$ ). <b>Output</b> Print the number of chocolates you will get after solving N problems.  <b>Samples</b> <table><tr><th>Input</th><th>Output</th></tr><tr><td>1</td><td>1</td></tr><tr><td>2</td><td>3</td></tr><tr><td>3</td><td>6</td></tr><tr><td>4</td><td>10</td></tr></table> For the 3rd test case, you'll get $1 + 2 + 3 = 6$ chocolates. For the 4th test case, you'll get $1 + 2 + 3 + 4 = 10$ chocolates.	Input	Output	1	1	2	3	3	6	4	10	5
Input	Output										
1	1										
2	3										
3	6										
4	10										
3. Sheldon and Penny have been paired for scavenger hunts. They Need to find the key which is the 2 <sup>nd</sup> smallest number in an array. Write a program to find the 2nd smallest element of an array.	5										
4. Write a program that reads two numbers and display maximum using pointer.	5										
5. Jeetu vaiya wants to keep track of his students' grades in his class. He has saved the data in a structure that contains the name, roll, and marks of each student.	5										

Write a program that read Students' name, roll and marks. then input roll number and display corresponding name and marks.	
<p>6. Samantha is a data analyst who has been given a task to analyze a large amount of text data. She wants to convert all the text to uppercase and lowercase, and calculate the frequency of each character to get a better understanding of the data. She has saved the text data in a file called "text.txt" and she needs your help to write a program to do this.</p> <p>Write a program that read a line of text from a file and convert it upper to lower and lower to upper and calculate the frequency of each character.</p>	5