

**Jadavpur University**  
**Session 2021-2022, Odd Semester**  
**Computer Programming and Numerical Methods**  
**A3 Group, BCSE 1**

**Flowchart and Algorithm**

1. Write an algorithm to determine the maximum of three numbers. Also draw the corresponding flow chart.
2. Write an algorithm to determine the sum of individual digits of a given integer. Also draw the corresponding flowchart.
3. Write an algorithm to print the reverse of a number read as input. Also draw the corresponding flow chart. **[OPTIONAL]**
4. Write an algorithm to determine whether a given number is prime or not. Also draw the corresponding flowchart.
5. Write an algorithm to generate the first 100 prime numbers. Also draw the corresponding flow chart.
6. Draw a flowchart to input three numbers in the variables a, b and c and hence to find the roots of the quadratic equation  $ax^2 + bx + c = 0$ . Consider carefully the zero input values of the coefficients a, b and c. **[OPTIONAL]**
7. Draw a flowchart to input 10 numbers, sort the numbers in ascending order and hence to write the numbers in sorted order. **[OPTIONAL]**