

**MCA Sem-I**  
***CSC15: Lab-I (APD)***  
**Lab Assignment- III**

**Last Date of Submission : February 8, 2021**

1. Write a program to compute all the prime factors of a given integer.
2. Write program to generate a uniform set of pseudo-random numbers using linear congruential method. Successive members of the linear congruential sequence (x) are generated using the expression:

**$x_{n+1} = (ax_n + b) \bmod m$  for  $n \geq 0$** , where the parameters a,b,m,x<sub>0</sub> must be chosen in advance according to certain criteria. The parameters a, b and m are referred to as multiplier, increment and modulus respectively and their values should be greater than or equal to zero and m should be greater than x<sub>0</sub>, a and b.

3. Given some integer x, write a program to compute the value of x<sup>n</sup> where n is positive number considerably greater than 1.
4. Write a program to find all the prime numbers lying between 100 and 200 using user-defined function.