# Online 1 (Boolean Algebra)

Subsection: C2

Duration: 25 minutes

## Problem Description:

Reduce the *((Last three Digits of StudentID - 1 )% 6)th* Boolean function in the following list and implement the reduced circuit in Logisim using simple gates only. You must use the 7400-series IC chips: IC 74x04, IC 74x08, and IC 74x32 corresponding to the logic gates. Make sure to use **minimum no. of logic gates**. You must submit both the simplification steps and the circuit.

0) A+A'B'C+A'B'D+A'C'D'
1) C'A'B+C'A'D+C'B'D'+C
2) CAD'+CB'A'+CB'D+C'
3) B'A'D'+B+B'C'A+B'C'D
4) A'+ABD'+AC'B'+AC'D
5) BA'C'+BA'D+B'+BCD'

## Submission:

1. Create a folder using your roll number.
2. Put all your circuit files in the folder.
3. Put the PDF file containing your simplification steps in the folder. The simplification steps must be handwritten.
4. Create a zip file using your roll number and submit it.
5. If any kind of copying is detected, you will receive -100% marks.