July 2023 CSE 206
Online Assignment on K-Maps

Subsection A2, C2

Simplify the following function (Function No. equal to your student ID `mod` 3) into a minimal SOP form using K-maps. Implement them in a simulator using ICs corresponding to inverters and 2-input AND/OR gates.

0. $f(A, B, C, D, E) = \Sigma(0, 6, 22, 27, 29) + \text{D}(1, 2, 3, 4, 5, 7, 14, 15, 23, 25, 30, 31)$
1. $f(A, B, C, D, E) = \Sigma(8, 11, 19, 23, 31) + \text{D}(3, 5, 7, 9, 10, 12, 13, 14, 15, 21, 27, 29)$
2. $f(A, B, C, D, E) = \Sigma(2, 6, 8, 11, 12, 15, 16, 19, 20, 23, 26, 30) + \text{D}(0, 1, 4, 5, 10, 14, 18, 22, 24, 25, 28, 29)$

Submission Guideline

Create a directory with your 7 digit student id as its name. Put the circuit files and a scanned PDF of your handwritten simplification into the directory created in step 1. Zip the directory (compress in .zip format; .rar, .7z or any other format is not acceptable), and upload the .zip file on MOODLE.