ELEC2200 Homework #6 Spring 2021

Submit a single PDF file online (Canvas) by 10:50 a.m., 3/11 (Thursday).

You must show how you get your answer in each problem. The final answer only will receive no credit.

1. Use the Quine-McCluskey method to find the minimal SOP expression of the function, f(A,B,C,D) = $\sum m(1, 4, 5, 6, 8, 9, 10, 12, 14)$

2. Use the Quine-McCluskey method to find the minimal SOP expression of the function, f(A,B,C,D) = $\sum m(0,6,9,10,13) + d(1,3,8)$

3. Design a minimal 2-level NAND realization of the function:
f(A,B,C,D) = $\sum m(1,2,3,5,6,7,8,9,12,14)$

4. Repeat Problem 3 for NOR gates.

5. For the (timing) diagram below, find both minimal NAND-NAND and minimal NOR-NOR realizations of the function, f(A,B,C).