

Ankara University

COM275

2021 – Fall

Homework-2

Due Date: 27.10.2021 11:59 p.m.

Q1. Given the following Boolean function:

$$F = xy'z + x'y'z + w'xy + x'y + wxy$$

- a) Obtain the truth table of the function.
- b) Draw the logic diagram using the original Boolean expression.
- c) Simplify the function to a minimum number of literals using Boolean Algebra.
- d) Obtain the truth table of the function from the simplified expression and show that it is the same as the one in part (a).
- e) Draw the logic diagram from the simplified expression and compare the total number of gates with the diagram of part (b).