COMSATS University Islamabad, Lahore Campus
Department of Electrical and Computer Engineering
M. A. Jinnah Campus, Lahore.

EEE241 – Digital Logic Design

SP23-BCS-A Fall 2023

Total Marks 20 **Tuesday 03 October 2023**

Assignment 1

Resource Person: Dr. Muhammad Farooq-i-Azam

Submission Deadline: **Tuesday 10 October 2023**

Problem 1 **(10)**

Simplify the following Boolean expressions to a minimum number of literals:

(a) xyz + x'y + xyz'
(b) x'yz + xz
(c) (x + y)'(x'+ y')
(d) xy + x(wz + wz')
(e) (yz' + x'w)(xy' + zw')

Problem 2 **(10)**

Implement the following Boolean function

$$F = x'y + xy' + xz$$

using each of the following:

(a) AND, OR and inverter gates
(b) OR and inverter gates
(c) AND and inverter gates
(d) NAND and inverter gates
(e) NOR and inverter gates

Notice

Work submitted should be your own. A strict disciplinary action will be taken against any students who submit plagiarized homework or assignment. This includes ZERO marks in the submitted work, fine, failure in the course and expulsion from the degree program.