



Istanbul Technical University
Department of Computer Engineering

04.10.2013

BLG 231E - Digital Circuits Assignment 2

Due Date: 10.10.2013, Thursday, 17.00.

- Please **write neatly**.
- If you are not preparing your homework in a computer, please show complement of a symbol by putting a **dash** over the symbol (e.g. do not use x' use \bar{x}).
- Plagiarized assignments will be given a negative mark.
- **No late submissions** will be accepted.

Submissions: Please submit your solutions to the Digital Circuits Course Assignment Box at the department secretary's office.

1. The truth table of expression f is given as follows.

a	b	c	d	f
0	0	0	0	0
0	0	0	1	1
0	0	1	0	0
0	0	1	1	0
0	1	0	0	1
0	1	0	1	1
0	1	1	0	1
0	1	1	1	1
1	0	0	0	0
1	0	0	1	1
1	0	1	0	0
1	0	1	1	0
1	1	0	0	1
1	1	0	1	1
1	1	1	0	1
1	1	1	1	1

- Write the first and second canonical form of f .
- Minimize the second canonical form of the expression.
- Draw the minimized expression in b by only using 2-input NOR.