EMTR-2011: Microcontrollers and Digital Logic
Assignment 2

Due date: 1:00pm, Oct. 8, Tuesday.

Question 1

Construction the Karnaugh maps based on the following truth tables and derive the circuit outputs.

(a)

x_1	x_2	x_3	x_4	f
0	0	0	0	1
0	0	0	1	0
0	0	1	1	1
0	0	1	0	1
0	1	0	0	0
0	1	0	1	0
0	1	1	1	1
0	1	1	0	1
1	0	0	0	1
1	0	0	1	0
1	0	1	1	0
1	0	1	0	1
1	1	0	0	0
1	1	0	1	0
1	1	1	0	0
1	1	1	1	1

(b)

x_1	x_2	x_3	x_4	f
0	0	0	0	1
0	0	0	1	1
0	0	1	1	0
0	0	1	0	0
0	1	0	0	1
0	1	0	1	1
0	1	1	1	0
0	1	1	0	0
1	0	0	0	0
1	0	0	1	0
1	0	1	1	1
1	0	1	0	1
1	1	0	0	1
1	1	0	1	1
1	1	1	0	1
1	1	1	1	1

Question 2

Problem 5.1

Question 3

Problem 5.2

Question 4

Problems 1-12, 1-29 in Chapter 1

Question 5

Problems 2-11, 2-19, 2-25, 2-26