Lab 5

CD \ AB	00	01	11	10
00	1	1	0	0
01	1	1	1	1
11	1	1	0	1
10	1	1	0	0

$F = A' + C'D + B'D$

$F' = A(C + D')(B + D')$

$= (AC + AD')(B + D')$

$= ABC + ACD' + ABD' + AD'$

$+ AD'$

CDE \ AB	00	01	11	10
000	1	0	0	1
001	1	0	0	1
011	1	1	0	0
010	0	0	0	0
110	0	0	0	0
111	1	1	0	0
101	0	0	0	0
100	1	1	1	1

$F = B'D'E' + CD'E' + A'B'C'E' + B'C'D' + A'CDE + A'C'DE$

01010 01011

01001 01010

A	B	A ⊙ B	A ∧ ¬B
0	0	1	0
0	1	0	0
1	0	0	1
1	1	1	0

11010 01110

10100

11010 2+8+16 26

01011 11

01111 15

11010

10101

01111

1)

input				Current State				Next State			
/Clr	/LD	T	P	Q_D	Q_C	Q_B	Q_A	Q_D^*	Q_C^*	Q_B^*	Q_A^*
0	X	x	x	x	x	x	x	0	0	0	0
1	0	x	x	x	x	x	x	D	C	B	A
1	1	0	x	x	x	x	x	Q_D	Q_C	Q_B	Q_A
1	1	1	0	x	x	x	x	Q_D	Q_C	Q_B	Q_A
1	1	1	1	0	0	0	0	0	0	0	1
1	1	1	1	0	0	0	1	0	0	1	0
1	1	1	1	0	0	1	0	0	0	1	1
1	1	1	1	0	0	1	1	0	1	0	0
1	1	1	1	0	1	0	0	0	1	0	1
1	1	1	1	0	1	0	1	0	1	1	0
1	1	1	1	0	1	1	0	0	1	1	1
1	1	1	1	0	1	1	1	1	0	0	0
1	1	1	1	1	0	0	0	1	0	0	1
1	1	1	1	1	0	0	1	1	0	1	0
1	1	1	1	1	0	1	0	1	0	1	1
1	1	1	1	1	0	1	1	1	1	0	0
1	1	1	1	1	1	0	0	1	1	0	1
1	1	1	1	1	1	0	1	1	1	1	0
1	1	1	1	1	1	1	0	1	1	1	1
1	1	1	1	1	1	1	1	0	0	0	0