Gabarito Exercícios Área 1 – Parte II – Circuitos CMOS

Questão 1

a) Função Booleana

F = ~(A.B)

Tabela Verdade

A	B	F
0	0	1
0	1	1
1	0	1
1	1	0

b) Função Booleana

F = ~(A.B.C)

Tabela Verdade

A	B	C	F
0	0	0	1
0	0	1	1
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	1
1	1	0	1
1	1	1	0

c) Função Booleana

F = ~(A+B)

Tabela Verdade

A	B	F
0	0	1
0	1	0
1	0	0
1	1	0

d) Função Booleana

F = ~((A+B).C.D)

Tabela Verdade

A	B	C	D	F
0	0	0	0	1
0	0	0	1	1
0	0	1	0	1
0	0	1	1	1
0	1	0	0	1
0	1	0	1	1
0	1	1	0	1
0	1	1	1	0
1	0	0	0	1
1	0	0	1	1
1	0	1	0	1
1	0	1	1	0
1	1	0	0	1
1	1	0	1	1
1	1	1	0	1
1	1	1	1	0

e) Função Booleana

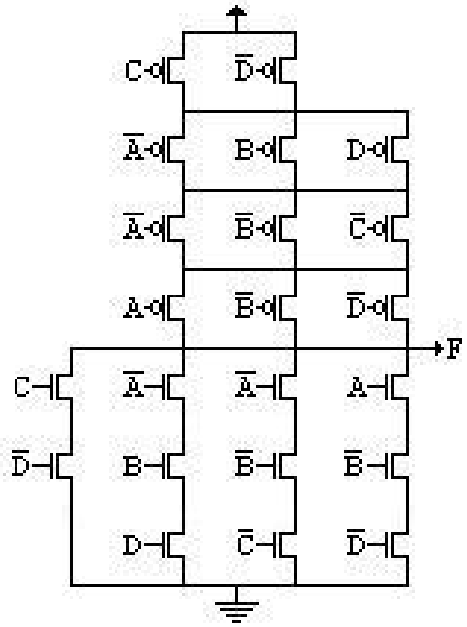
F = ~(((A+B).C)+D)

Tabela Verdade

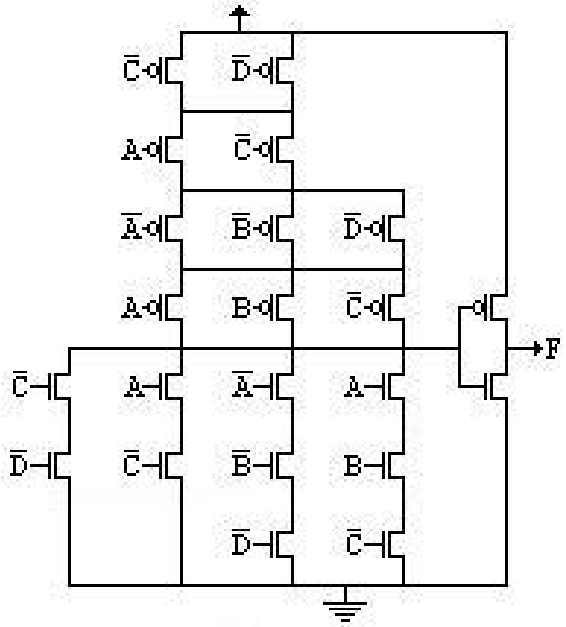
A	B	C	D	F
0	0	0	0	1
0	0	0	1	0
0	0	1	0	1
0	0	1	1	0
0	1	0	0	1
0	1	0	1	0
0	1	1	0	0
0	1	1	1	0
1	0	0	0	1
1	0	0	1	0
1	0	1	0	0
1	0	1	1	0
1	1	0	0	1
1	1	0	1	0
1	1	1	0	0
1	1	1	1	0

Questão 2

a)


C
$\bar{D}$
$\bar{A}$
B
D
$\bar{A}$
$\bar{B}$
$\bar{C}$
A
$\bar{B}$
$\bar{D}$
F
C
$\bar{A}$
$\bar{A}$
A
$\bar{D}$
B
$\bar{B}$
$\bar{B}$
D
$\bar{C}$
$\bar{D}$

b)


$\bar{C}$
$\bar{D}$
A
$\bar{C}$
$\bar{A}$
$\bar{B}$
$\bar{D}$
A
B
$\bar{C}$
F
$\bar{C}$
A
$\bar{A}$
A
$\bar{D}$
$\bar{C}$
$\bar{B}$
B
$\bar{D}$
$\bar{C}$