

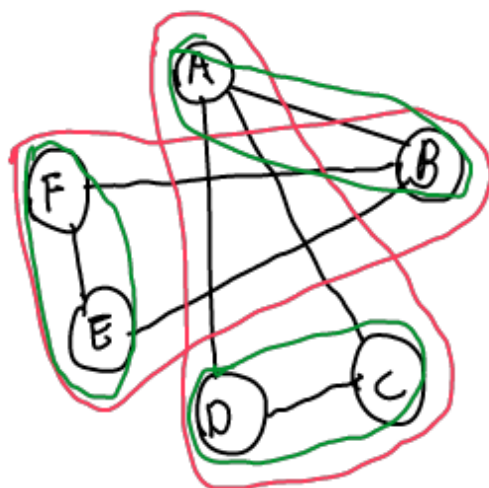
⇒ Assume Fundamental Mode
next state, output

flow Table

curr. state	DG=00	01	10	11
a	c, —	a, 0	—, —	b, —
b	—, —	a, —	f, —	b, 1
c	c, 0	a, —	d, —	—, —
d	c, —	—, —	d, 0	b, —
e	e, 1	a, —	f, —	—, —
f	e, —	—, —	f, 1	b, —

State Reduction

b	✓				
c	✓	(F,D)✗			
d	✓	(F,D)✗	✓		
e	(C,E)✗	✓	✗	(C,E)✗ (D,F)✗	
f	(C,E)✗	✓	(C,E)✗ (D,F)✗	(C,E)✗	✓
	a	b	c	d	e



Reduced Flow Table

Curr. State	next state, output			
	DG=00	01	10	11
A	(A,0)	(A,0)	(A,0)	B,-
B	(B,1)	A,-	(B,1)	(B,1)

$$(a, c, d) \triangleq A \quad (b, e, f) \triangleq B$$

State Assignment.

$$A \leftarrow 0$$

$$B \leftarrow 1$$

Transition Table

Curr. State y_1	next state (Y_1), output (Q)			
	DG=00	01	10	11
0	0,0	0,1	0,0	1,-
1	1,1	0,-	1,1	1,1

Equations

y_1	DG			
	00	01	11	10
0	0	0	1	0
1	1	0	1	1

$$Y_1 = DG + \bar{G}y_1$$

y_1	DG			
	00	01	11	10
0	0	0	✗	0
1	1	✗	1	1

$$Q = y_1$$

S/n1

A
B
C
D
E
F

S/n2

(A,B)
(C,D)
(F,E)

S/n3

(A,C,D)
(B,E,F)

Circuit

