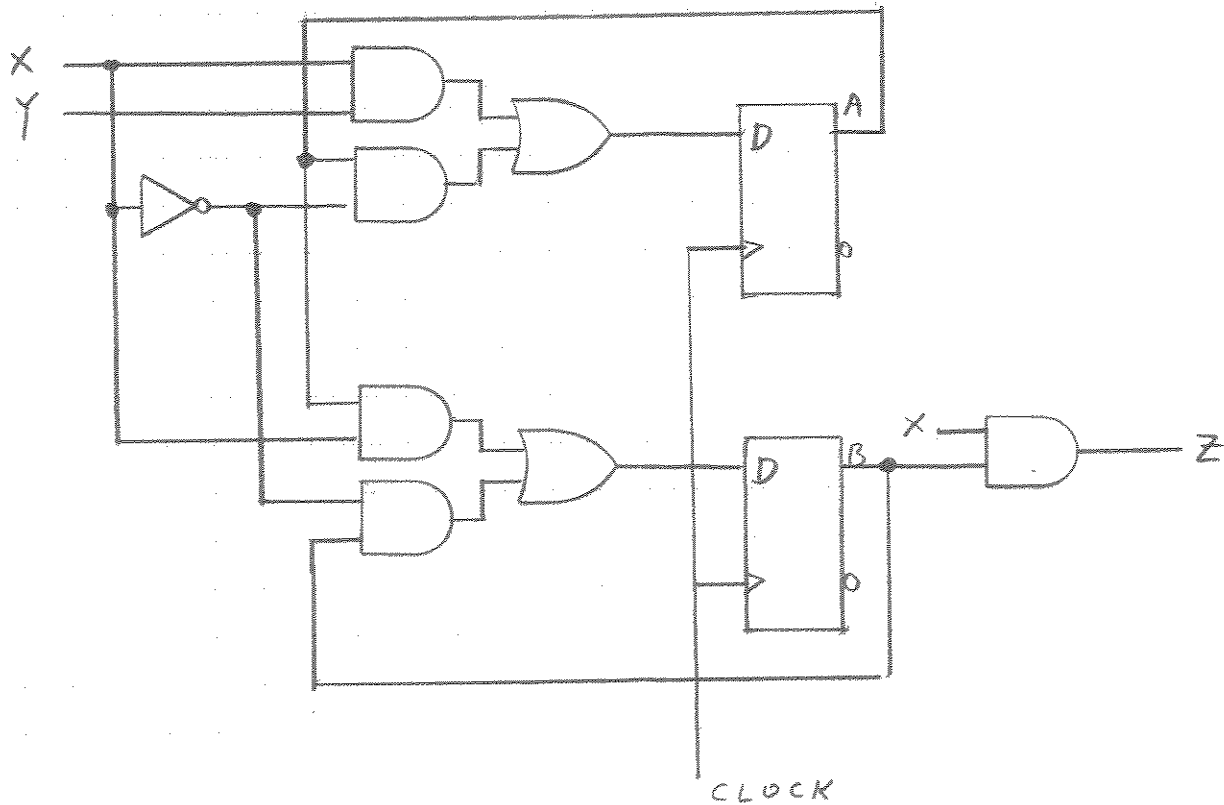


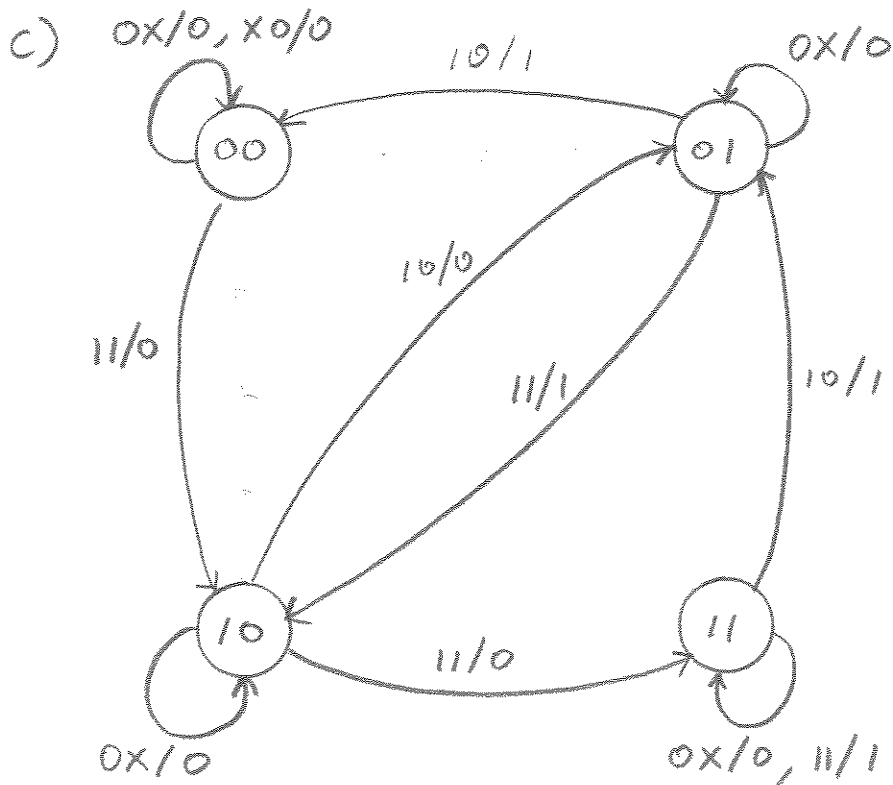
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5-6) $D_A = \bar{X}A + XY$
a) $D_B = \bar{X}B + XA$
 $Z = XB$



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 5-6) (cont.)
 b)

Present state		Inputs		Next state		Output
A	B	X	Y	A	B	Z
0	0	0	0	0	0	0
0	0	0	1	0	0	0
0	0	1	0	0	0	0
0	0	1	1	1	0	0
0	1	0	0	0	1	0
0	1	0	1	0	1	0
0	1	1	0	0	0	1
0	1	1	1	1	0	1
1	0	0	0	1	0	0
1	0	0	1	1	0	0
1	0	1	0	0	1	0
1	0	1	1	1	1	0
1	1	0	0	1	1	0
1	1	0	1	1	1	0
1	1	1	0	0	1	1
1	1	1	1	1	1	1



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5-11)

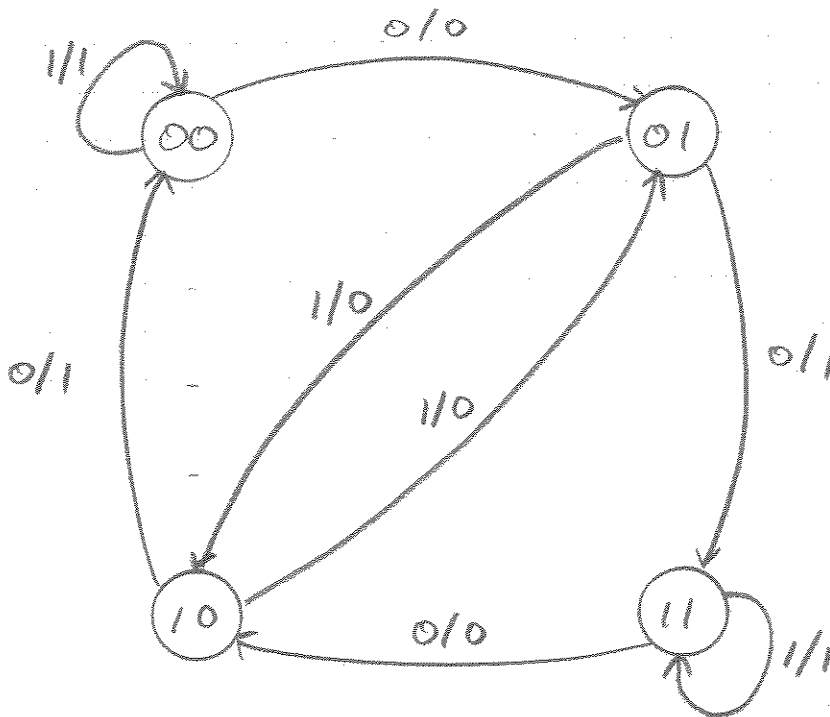
$$S_A = B$$

$$R_A = \overline{B}$$

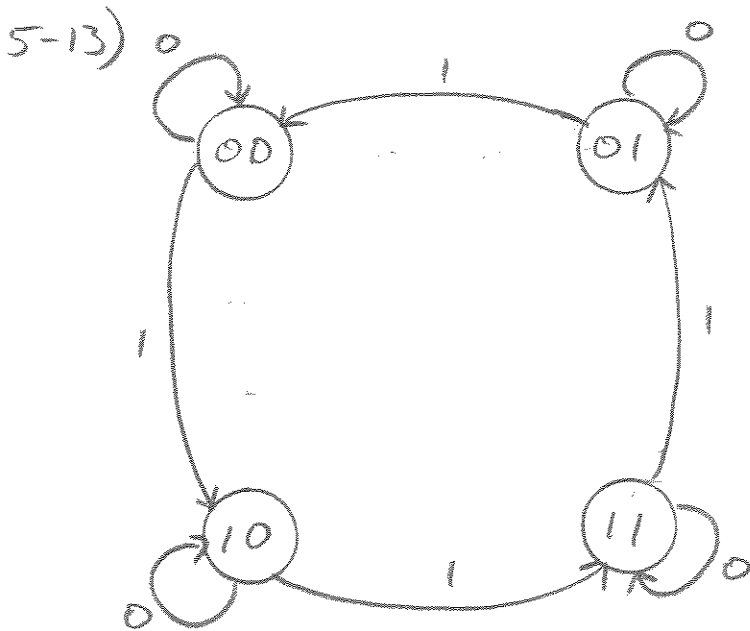
$$S_B = \overline{X \oplus A}$$

$$R_B = X \oplus A$$

Present			Next		
State	Input		State	Output	
A B	X		A B	Y	
0 0	0		0 1	0	
0 0	1		0 0	1	
0 1	0		1 1	1	
0 1	1		1 0	0	
1 0	0		0 0	1	
1 0	1		0 1	0	
1 1	0		1 0	0	
1 1	1		1 1	1	



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Present State		Input	Next State	
A	B		A	B
0	0	0	0	0
0	0	1	1	0
0	1	0	0	1
0	1	1	0	0
1	0	0	1	0
1	0	1	1	1
1	1	0	1	1
1	1	1	0	1

$$D_A = A\bar{X} + \bar{B}X$$

		B	
		0	1
A	0	0	1
	1	1	0

$$D_A = A\bar{X} + \bar{B}X$$

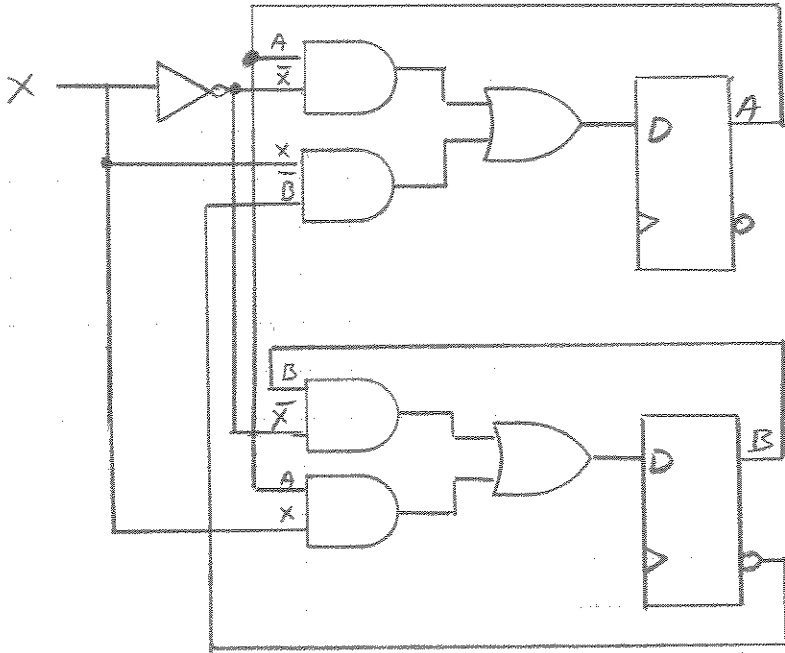
$$D_B = AX + B\bar{X}$$

		B	
		0	1
A	0	0	0
	1	1	1

$$D_B = AX + B\bar{X}$$

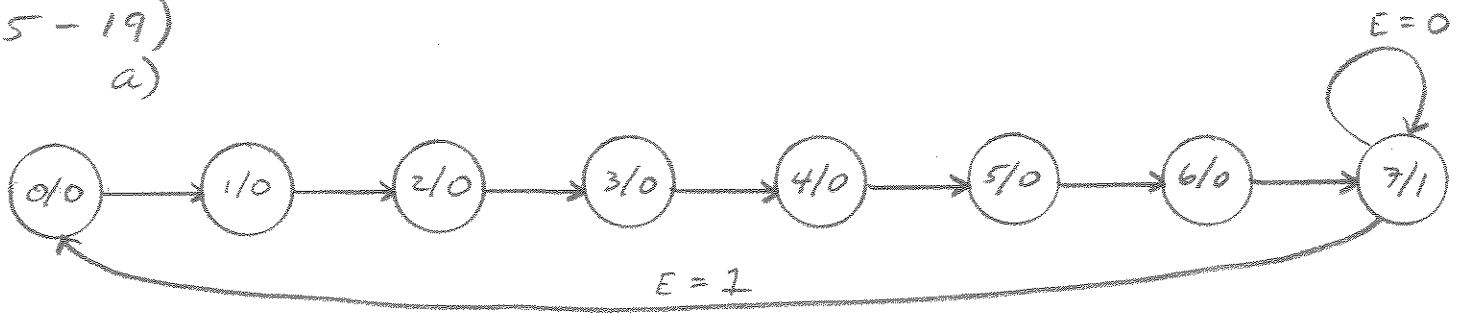
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5-13) (cont.)



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5-19)
 a)



b)

Present state D_2, D_1, D_0	Next State		Output Z
	$E=0$ D_2, D_1, D_0	$E=1$ D_2, D_1, D_0	
0 0 0	0 0 1	0 0 1	0
0 0 1	0 1 0	0 1 0	0
0 1 0	0 1 1	0 1 1	0
0 1 1	1 0 0	1 0 0	0
1 0 0	1 0 1	1 0 1	0
1 0 1	1 1 0	1 1 0	0
1 1 0	1 1 1	1 1 1	0
1 1 1	1 1 1	0 0 0	1

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5-19) (cont.)

