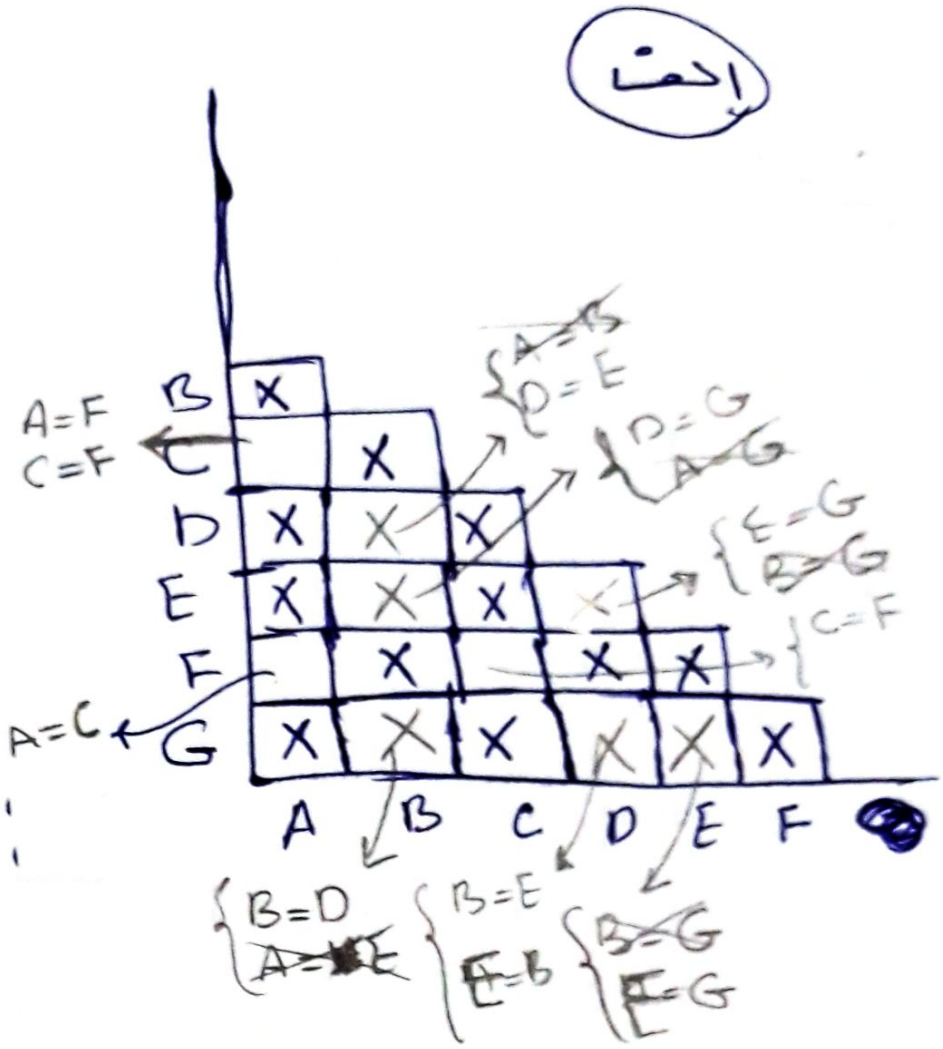
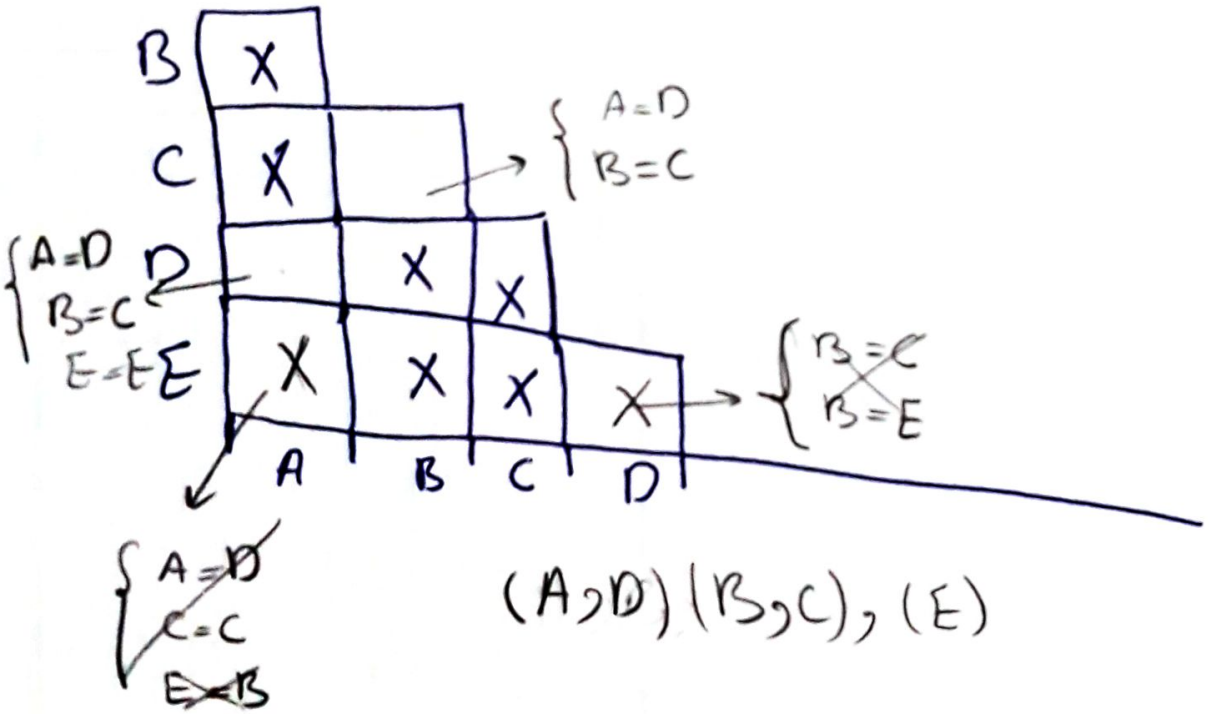
	0	1
A	A/0	C/0
B	D/1	A/0
C	F/0	F/0
D	E/1	B/0
E	G/1	G/0
F	C/0	C/0
G	B/1	H/0



A=F if A=C → C=F } B=G if B=D

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

	I	J	K
A	D/1	C/0	E/1
B	D/0	E/0	C/1
C	A/0	E/0	B/1
D	A/1	B/0	E/1
E	A/1	C/0	B/1



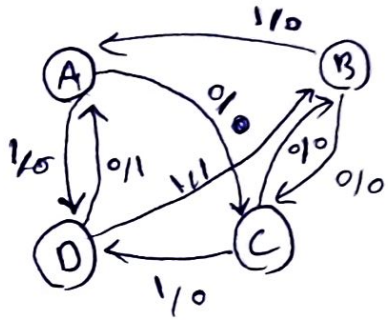
(A,D) (B,C), (E)

A	C 10	D 11	0	0
B	C 10	A 00	0	0
C	B 01	D 11	0	0
D	A 00	B 01	1	1

B = 01

C = 10

D = 11



PS x	PS y	Input	out	nextstate x'	nextstate y'	δ_A	β_A	J_B	K_B
A: 0	0	0	0	C: 1	0	1	X	0	X
A: 0	0	1	0	D: 1	1	1	X	1	X
B 0	1	0	0	C: 1	0	1	X	X	1
B 0	1	1	0	A: 0	0	0	X	X	1
C 1	0	0	0	B: 0	1	X	1	1	X
C 1	0	1	0	D: 1	1	X	0	1	X
D 1	1	0	1	A: 0	0	X	1	X	1
D 1	1	1	1	B: 0	1	X	1	X	0

Q_0 $B_{/0}$

$B_{/1}$ $A_{/1}$

Q(t)	Q(t+1)	J	K
0	0	0	X
0	1	1	X
1	0	X	1
1	1	X	0

J_A

input \ state	00	01	11	10
0	1	1	X	X
1	1	0	X	X

K_A

	00	01	11	10
0	X	X	1	1
1	X	X	1	0

J_B

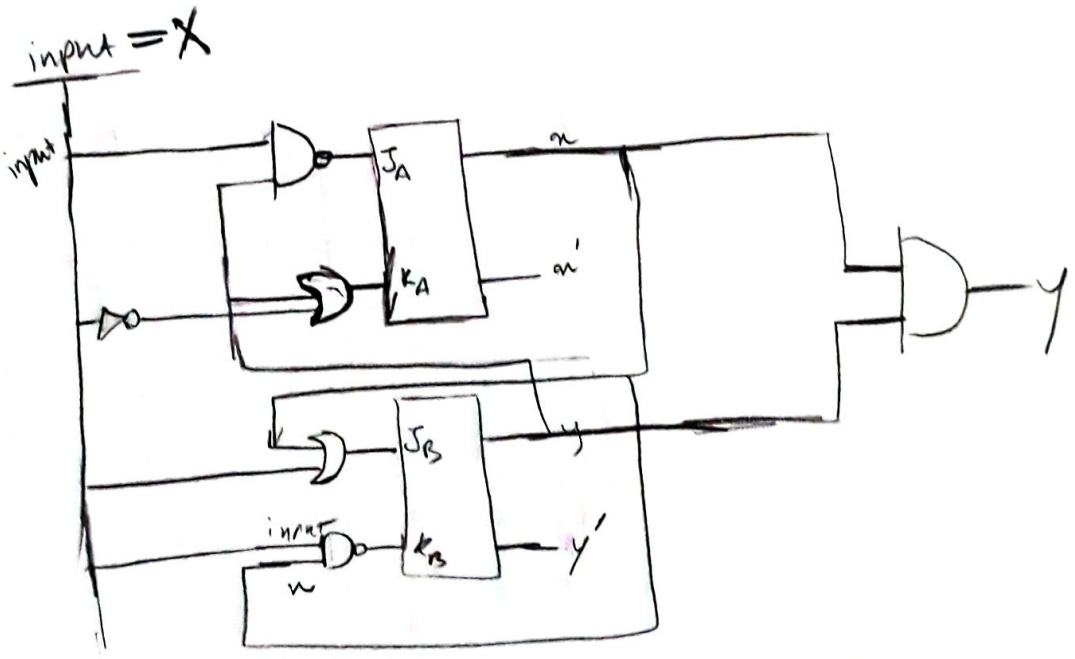
	00	01	11	10
0	0	X	X	1
1	1	X	X	1

$J_A = \bar{y} + \overline{input} = (y \cdot input)$ $K_A = \overline{input} + y = \overline{(\bar{y} \cdot input)}$ $J_B = x + input$

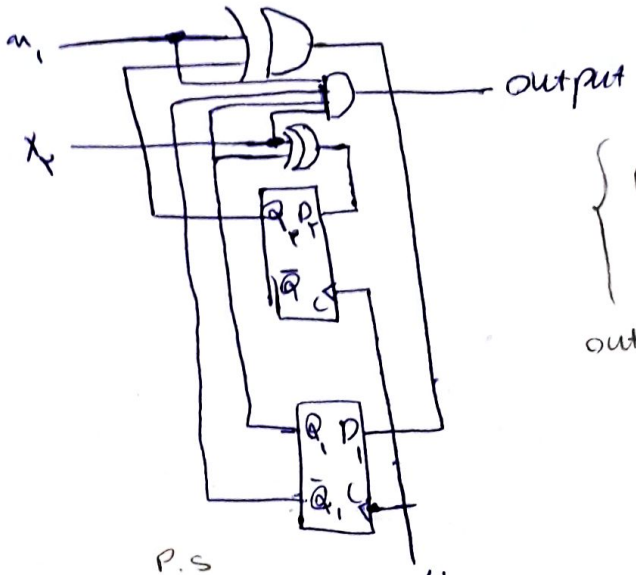
K_B

	00	01	11	10
0	X	1	1	X
1	X	1	0	X

$K_B = \bar{x} + \overline{input} = \overline{(x \cdot input)}$



سوال ③

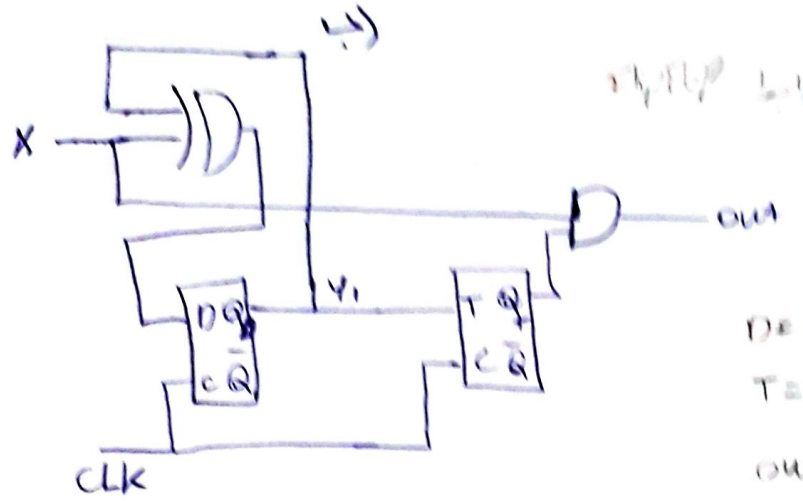


$$\begin{cases} D_1 = Q_1^+ \\ D_2 = Q_2^+ \end{cases} \Rightarrow \begin{cases} Q_1^+ = x_1 \oplus Q_2 \\ Q_2^+ = x_2 \oplus Q_1 \end{cases}$$

$$\begin{cases} D_1 = x_1 \oplus Q_2 \\ D_2 = x_2 \oplus Q_1 \end{cases}$$

$$\text{output} = x_2 \cdot Q_1 \cdot x_1 \cdot \overline{Q}_1$$

P.S				N.S		
Q_1	Q_2	x_1	x_2	Q_1^+	Q_2^+	out put
0	0	0	0	0	0	0
0	0	0	1	0	1	0
0	0	1	0	1	0	0
0	0	1	1	1	1	0
0	1	0	0	1	0	0
0	1	0	1	1	1	0
0	1	1	0	0	0	0
0	1	1	1	0	1	0
1	0	0	0	0	1	0
1	0	0	1	0	0	0
1	0	1	0	1	1	0
1	0	1	1	1	0	0
1	1	0	0	1	1	0
1	1	0	1	1	0	0
1	1	1	0	0	1	0
1	1	1	1	0	0	0



$D = Q'$

$T \oplus Q = Q'$

$D = X \oplus Q_D \rightarrow Q_D^+ = X \oplus Q_D$

$T = Q_D \rightarrow Q_T^+ = Q_T \oplus Q_D$

$output = Q_T \cdot X$

P.S			N.S		
Q_D	Q_T	X	Q_D^+	Q_T^+	output
0	0	0	0	0	0
0	0	1	1	0	0
0	1	0	0	1	0
0	1	1	1	1	1
1	0	0	1	1	0
1	0	1	0	1	0
1	1	0	1	0	0
1	1	1	0	0	1