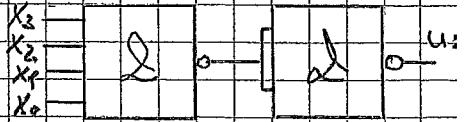
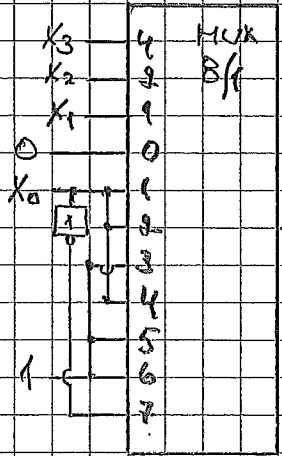


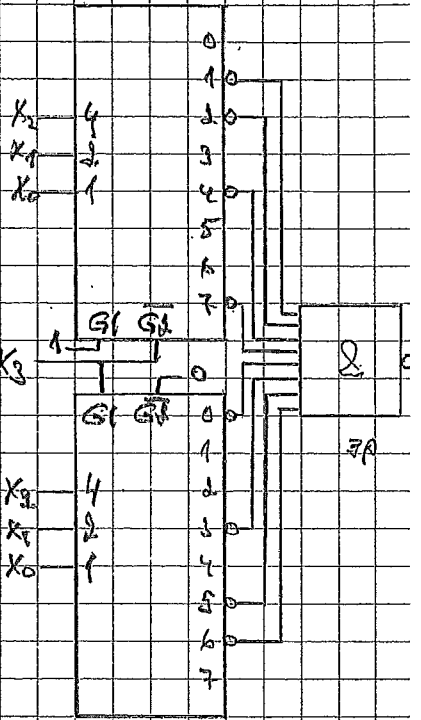
X_3	X_2	X_1	X_0	U_2	U_1	U_0	MUX
0	0	0	0	0	0	0	0
0	0	0	1	0	0	1	0
0	0	1	0	0	0	1	X_0
0	0	1	1	0	1	0	X_0
0	1	0	0	0	0	1	1
0	1	0	1	0	1	0	X_0
0	1	1	0	0	1	0	1
0	1	1	1	0	1	1	1
1	0	0	0	0	0	1	X_0
1	0	0	1	0	1	0	X_0
1	0	1	0	0	1	0	1
1	0	1	1	0	1	1	1
1	1	0	0	0	1	0	1
1	1	0	1	0	1	1	1
1	1	1	0	0	1	1	X_0
1	1	1	1	1	0	0	X_0



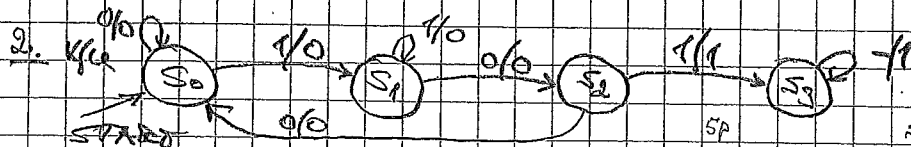
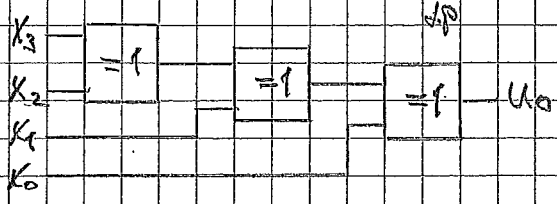
b)



c)



d) $U_0 = X_3 \oplus X_2 \oplus X_1 \oplus X_0$



S_1	S_0	X	U
0	0	0	0
0	1	0	0
1	1	1	1
1	0	0	0

X	Q_1^+	Q_0^+
0	0	0
0	1	0
1	0	1
1	1	1

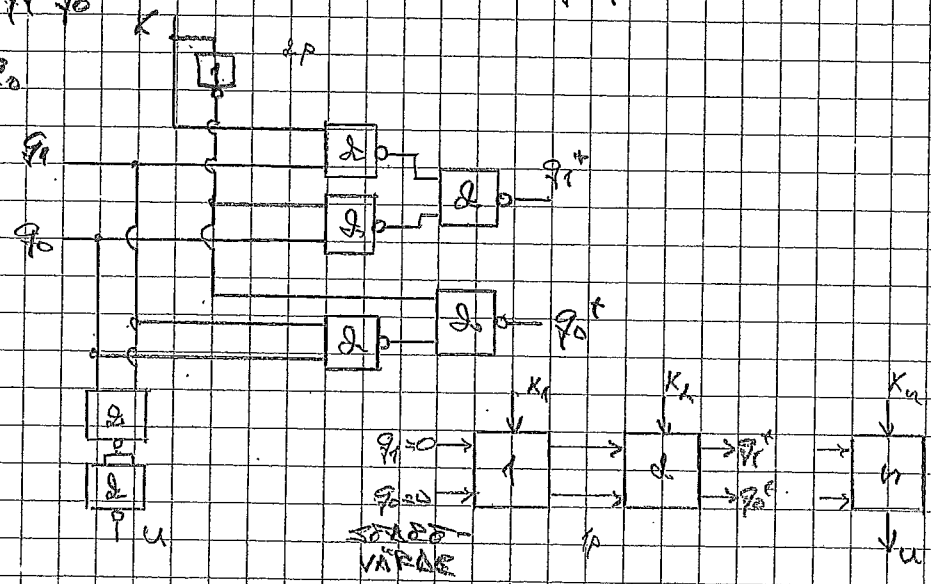
$Q_1^+ = Q_0 \cdot K' + Q_1 \cdot X$
 $Q_0^+ = X + Q_0 \cdot Q_0$
 $U = Q_1 \cdot Q_0$

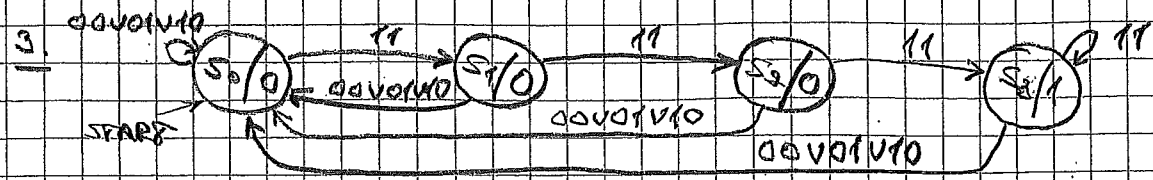
CELL 1: $Q_1^+ = Q_0 \Rightarrow$

$Q_1^+ = 0$
 $Q_0^+ = X$

CELL 2: $Q_1^+ = Q_0 \cdot K'$

$Q_0^+ = X$



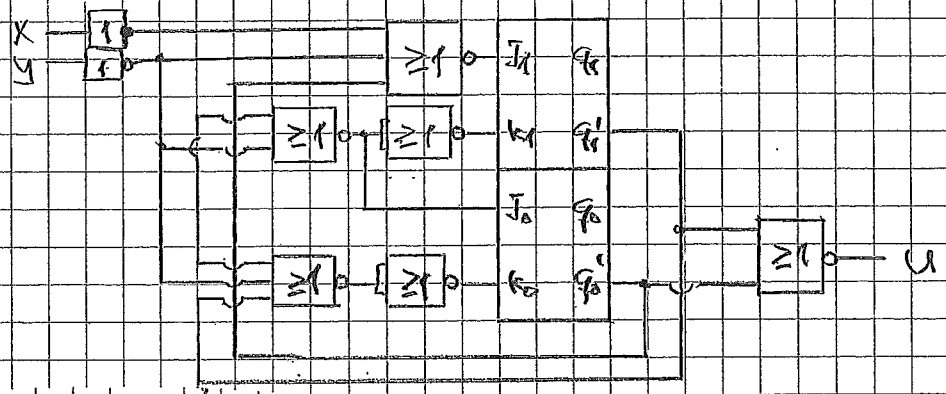


	xy	00	01	11	10	00	01	10	11	00	01	10	11
q_0^+	q_0	00	00	00	01	00	00	00	10	00	00	00	00
q_1^+	q_1	01	00	00	10	00	00	00	10	00	00	00	00
q_2^+	q_2	11	00	00	11	00	00	00	10	00	00	00	00
q_3^+	q_3	10	00	00	11	00	00	00	10	00	00	00	00

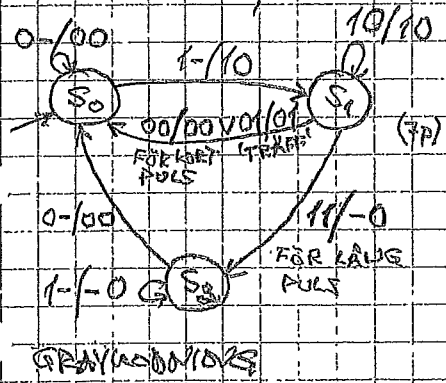
$$\begin{cases} J_1 = q_0 \cdot x \cdot y \\ K_1 = x + y \end{cases} \quad \begin{cases} J_2 = x \cdot y \\ K_2 = q_1 + x + y \end{cases} \quad \begin{cases} J_3 = (q_0 + x \cdot y)' \\ K_3 = (x + y)' \end{cases} \quad \begin{cases} J_0 = (x \cdot y)' \\ K_0 = (q_1 \cdot x \cdot y)' \end{cases}$$

$$U = q_1 \cdot q_0$$

$$U = (q_1 + q_0)'$$



4. INSTR.: IN, RCO
UTSIG.: L, UT

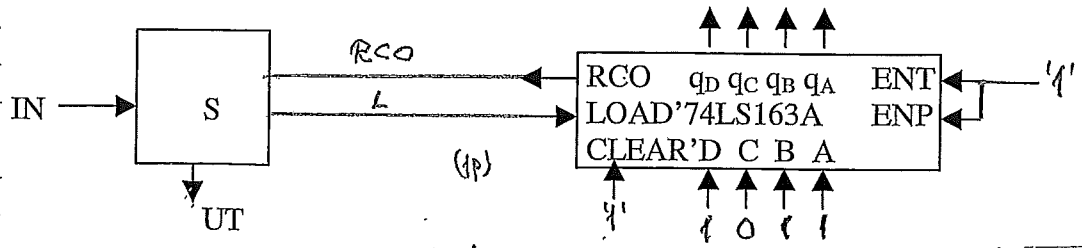


	xy	00	01	11	10	00	01	11	10
q_0^+	q_0	00	00	00	01	00	00	00	00
q_1^+	q_1	01	00	00	01	01	00	00	00
q_2^+	q_2	11	00	00	00	10	00	00	00
q_3^+	q_3	10	00	00	00	10	00	00	00

$$\begin{cases} J_2 = q_1 \cdot IN \cdot RCO \\ K_2 = IN \end{cases}$$

$$\begin{cases} q_2^+ = q_2 \cdot IN \vee q_1 \cdot IN \cdot RCO \\ q_1^+ = IN \end{cases} \quad (2P)$$

$$\begin{cases} J_1 = IN \\ K_1 = K_2 = IN \end{cases}$$



$$\begin{cases} L = IN \\ UT = q_2 \cdot q_1 \cdot IN \cdot RCO \end{cases}$$