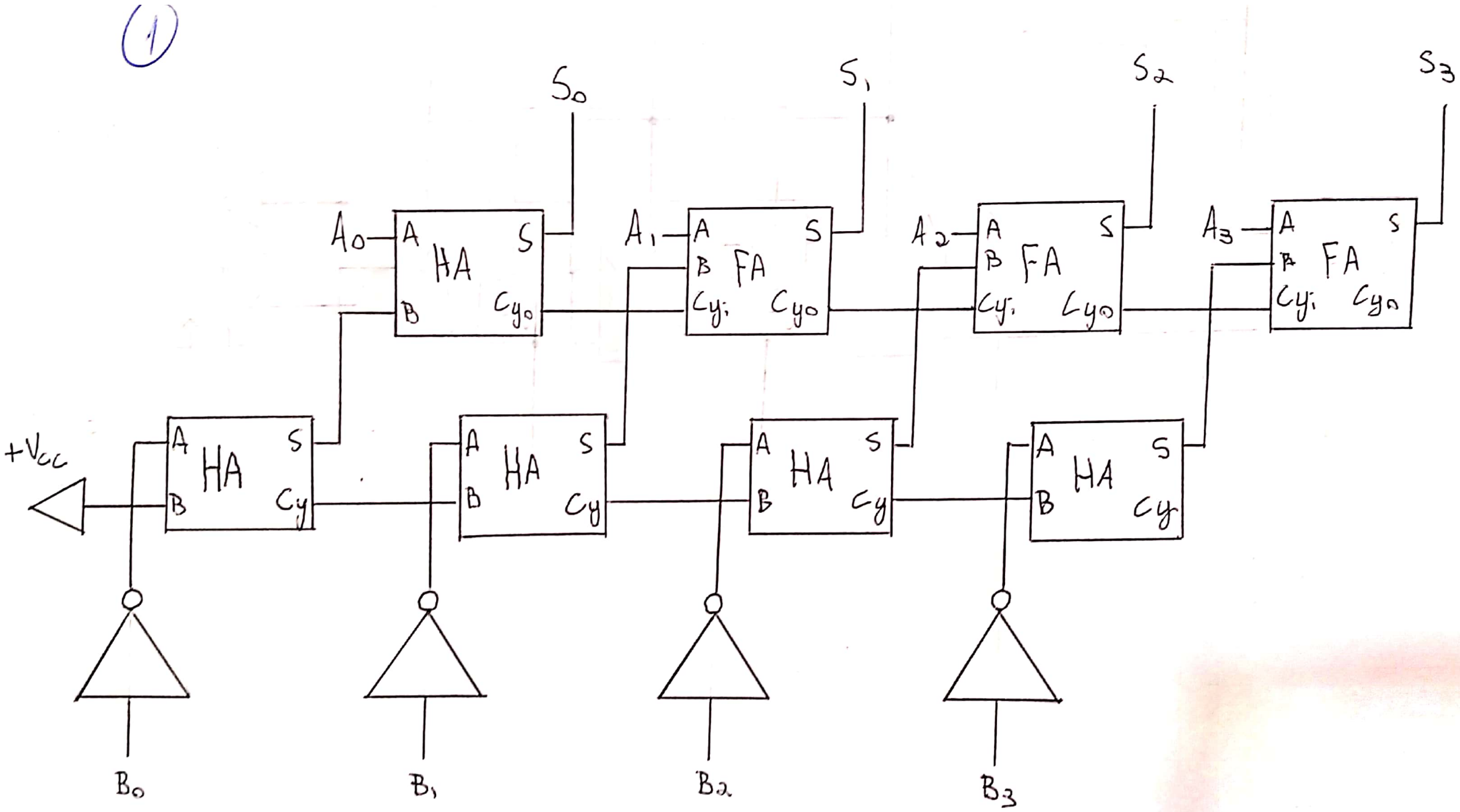
(1)

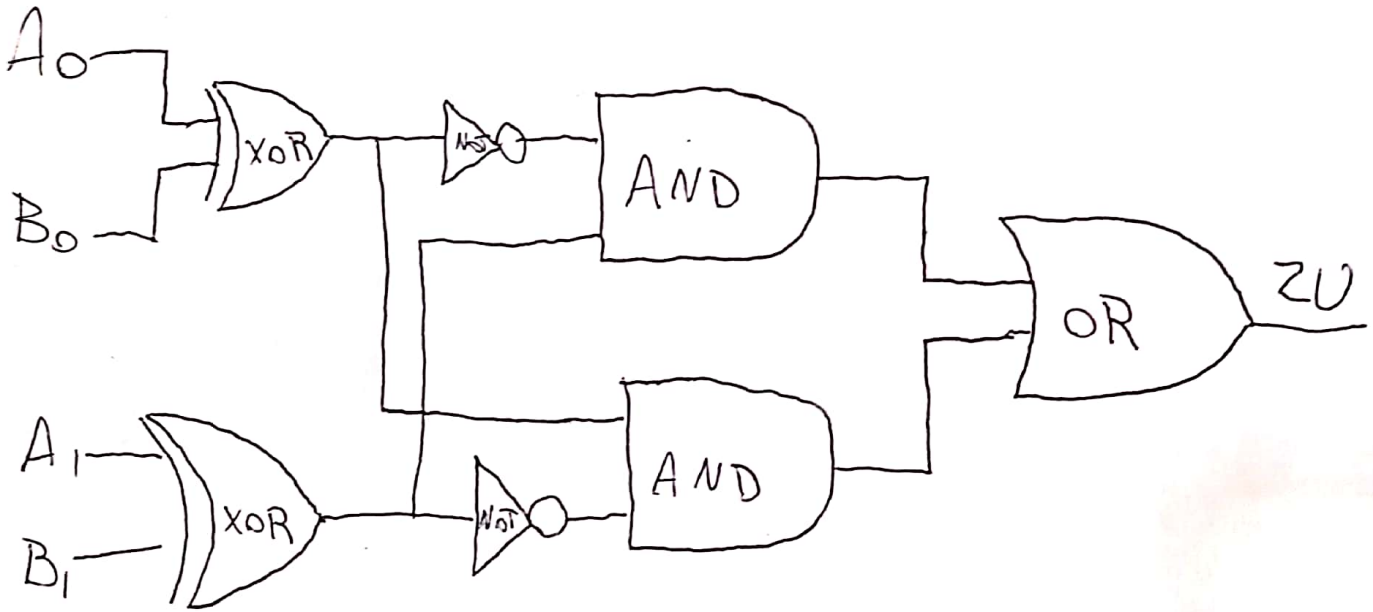


(2) A saída deve ser 1 quando $A_0 \neq B_0$ e $A_1 = B_1$ ou $A_0 = B_0$ e $A_1 \neq B_1$. Para fazer essa comparação bit a bit podemos utilizar as portas exclusivas:

$A_0 = B_0 \Rightarrow \overline{A_0 \oplus B_0}$ $\quad$ $A_0 \neq B_0 \Rightarrow A_0 \oplus B_0$

$A_1 = B_1 \Rightarrow \overline{A_1 \oplus B_1}$ $\quad$ $A_1 \neq B_1 \Rightarrow A_1 \oplus B_1$

$$ZU = (A_0 \oplus B_0)\overline{(A_1 \oplus B_1)} + \overline{(A_0 \oplus B_0)}(A_1 \oplus B_1)$$



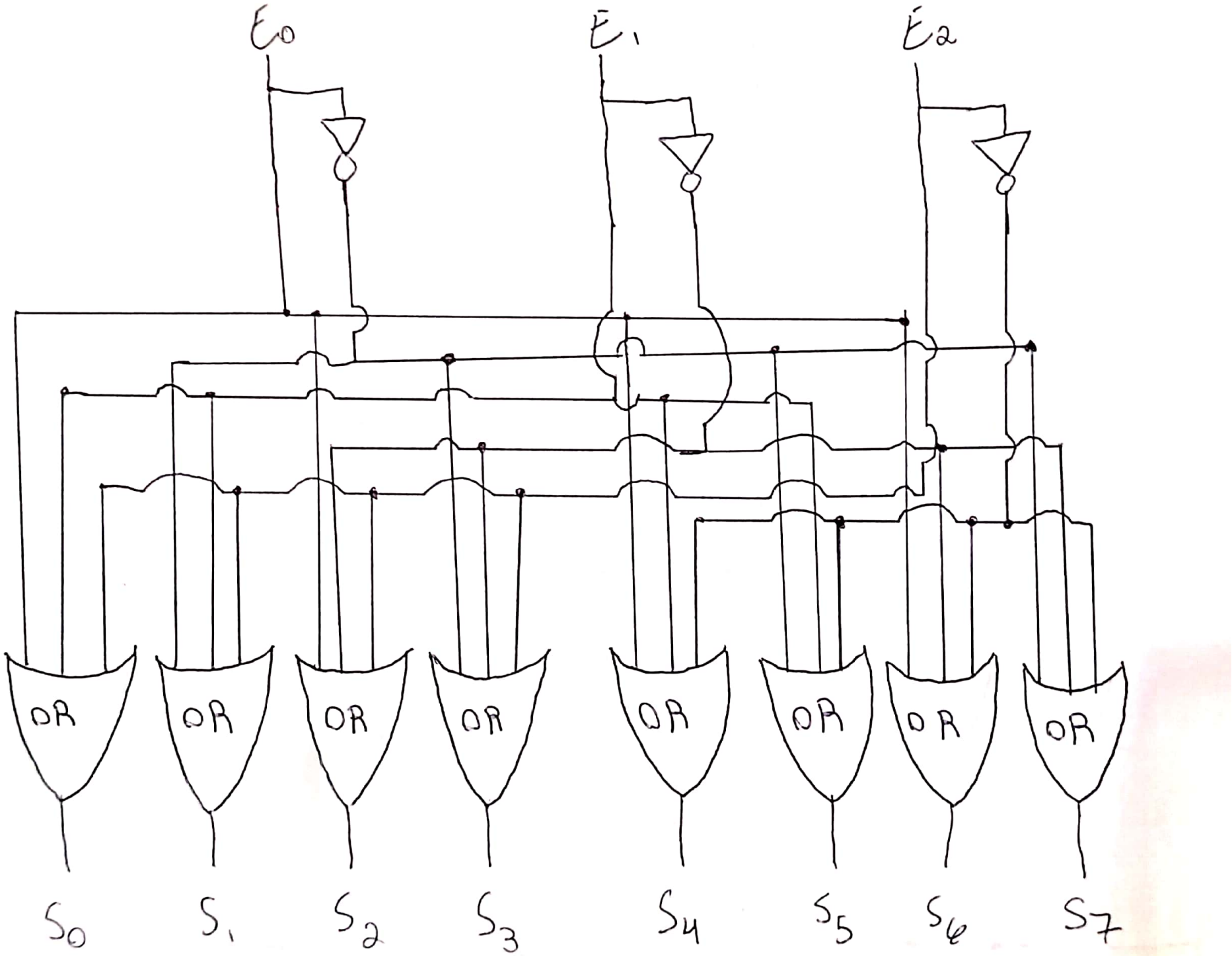
(3)

E_2	E_1	E_0	S_0	S_1	S_2	S_3	S_4	S_5	S_6	S_7
0	0	0	0	1	1	1	1	1	1	1
0	0	1	1	0	1	1	1	1	1	1
0	1	0	1	1	0	1	1	1	1	1
0	1	1	1	1	1	0	1	1	1	1
1	0	0	1	1	1	1	0	1	1	1
1	0	1	1	1	1	1	1	0	1	1
1	1	0	1	1	1	1	1	1	0	1
1	1	1	1	1	1	1	1	1	1	0

$S_0 = E_0 + E_1 + E_2$ $\quad S_1 = \overline{E}_0 + E_1 + E_2$ $\quad S_2 = E_0 + \overline{E}_1 + E_2$ $\quad S_3 = \overline{E}_0 + \overline{E}_1 + E_2$

$S_4 = E_0 + E_1 + \overline{E}_2$ $\quad S_5 = \overline{E}_0 + E_1 + \overline{E}_2$

$S_6 = E_0 + \overline{E}_1 + \overline{E}_2$ $\quad S_7 = \overline{E}_0 + \overline{E}_1 + \overline{E}_2$



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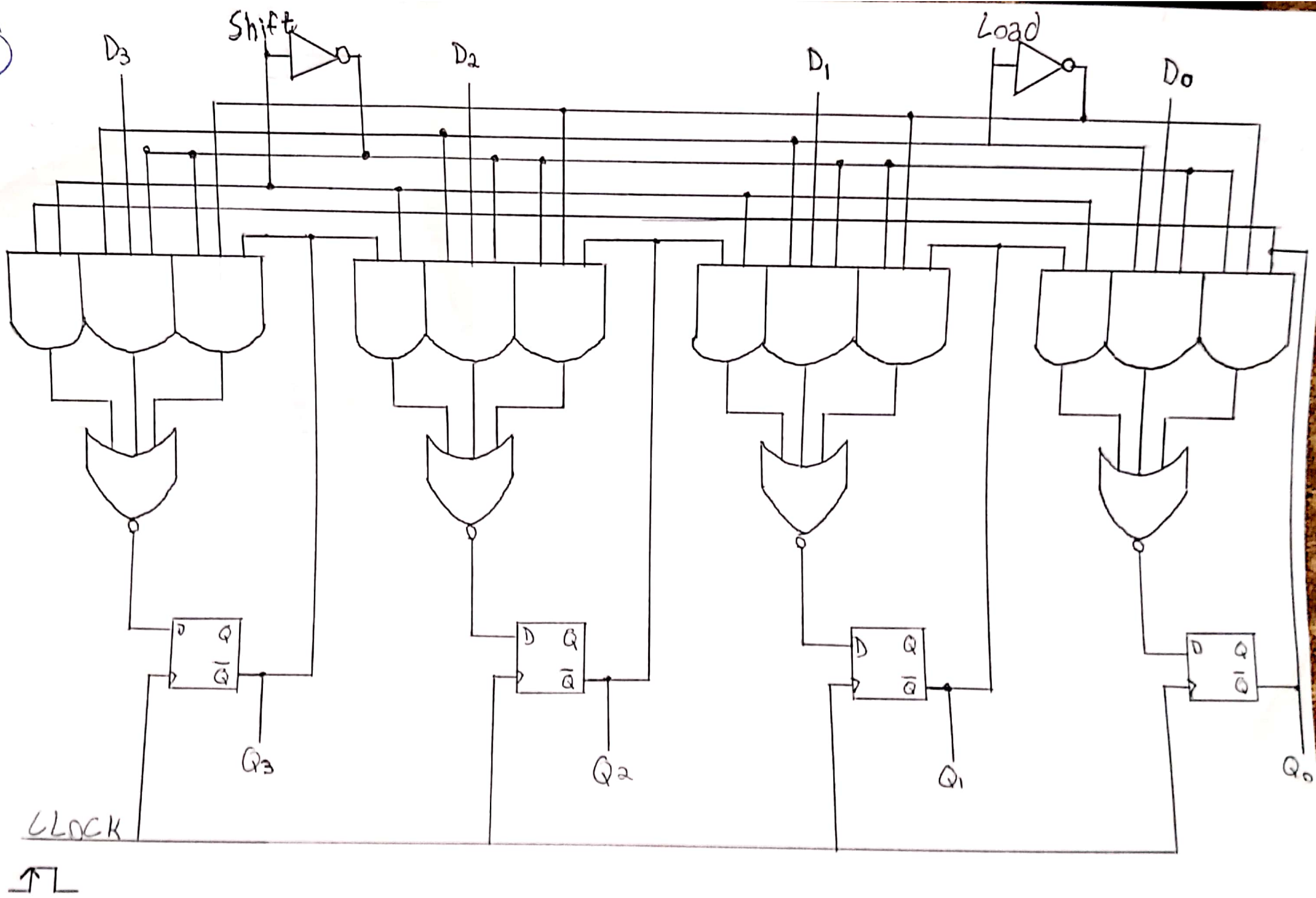

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