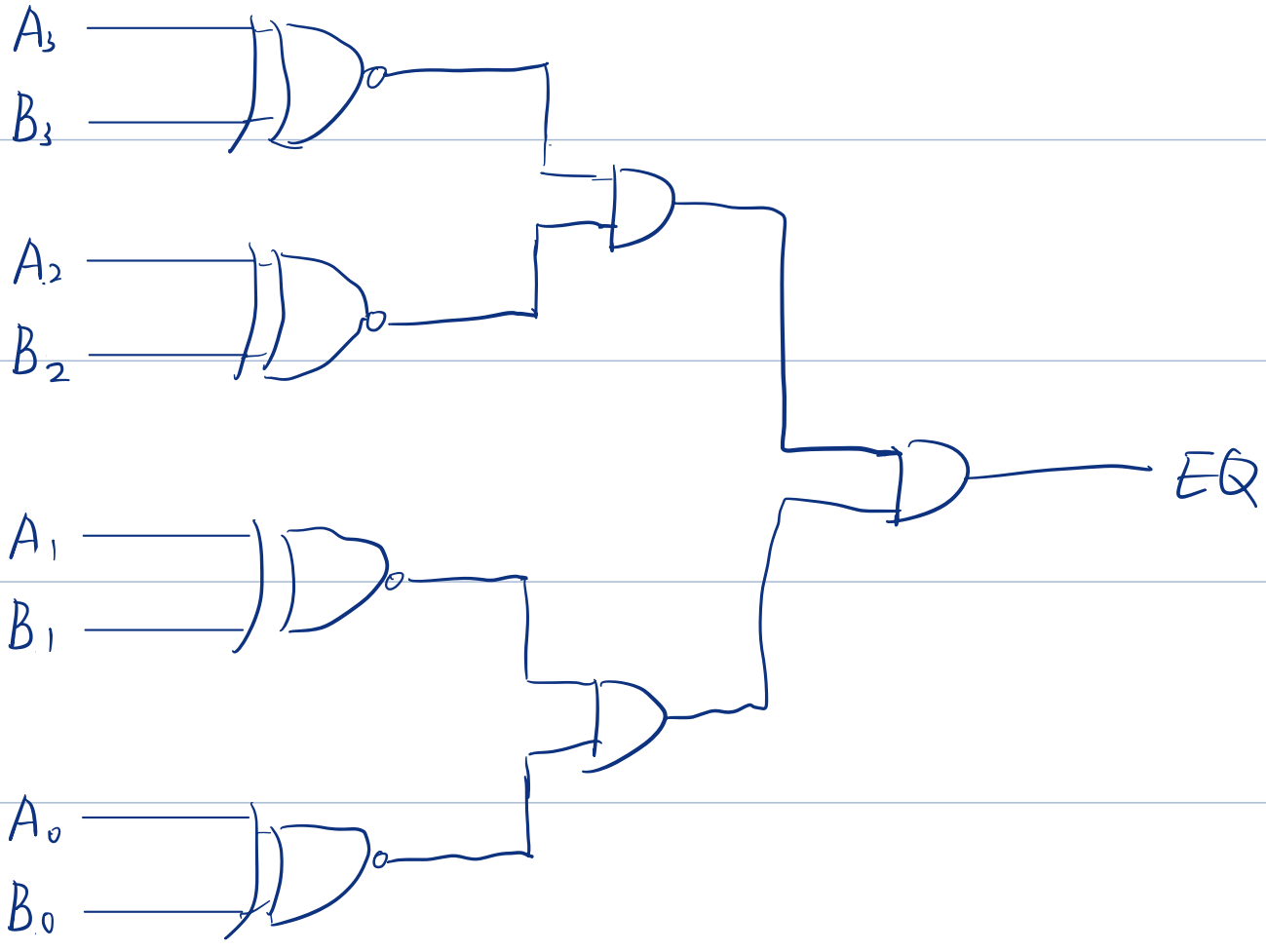
LAB 1

(1)

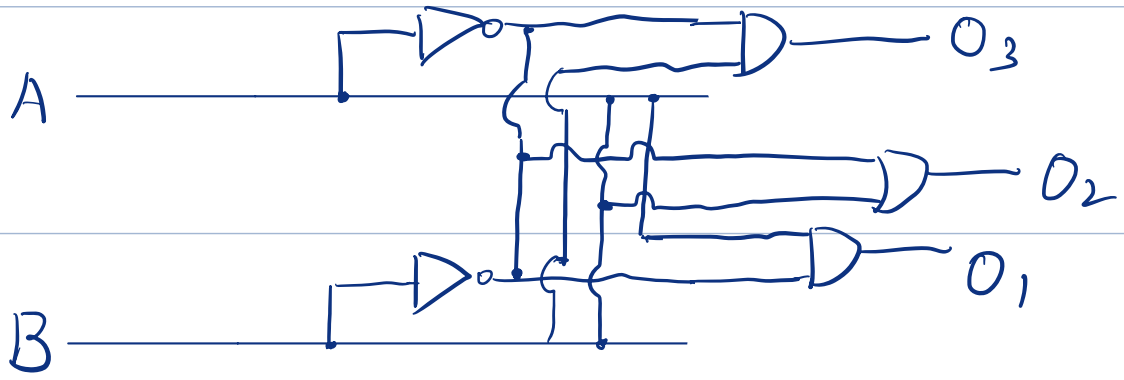


(2)

A	B	Y_1	Y_2	Y_3
0	0	0	1	0
0	1	0	0	1
1	0	1	0	0
1	1	0	1	0

$Y_1 = A\bar{B}$ $\quad Y_2 = \bar{A}\bar{B} + AB = \bar{A \oplus B}$ $\quad Y_3 = \bar{A}B$

$O_1 = A\bar{B}$ $O_2 = \bar{A}B + A\bar{B}$ $O_3 = AB$



⇓ with only NAND

$$O_2 = \overline{\overline{\bar{A}B + A\bar{B}}} = \overline{\bar{A}B + A\bar{B}}$$

$$= \overline{\overline{\bar{A}B} \cdot \overline{A\bar{B}}}$$