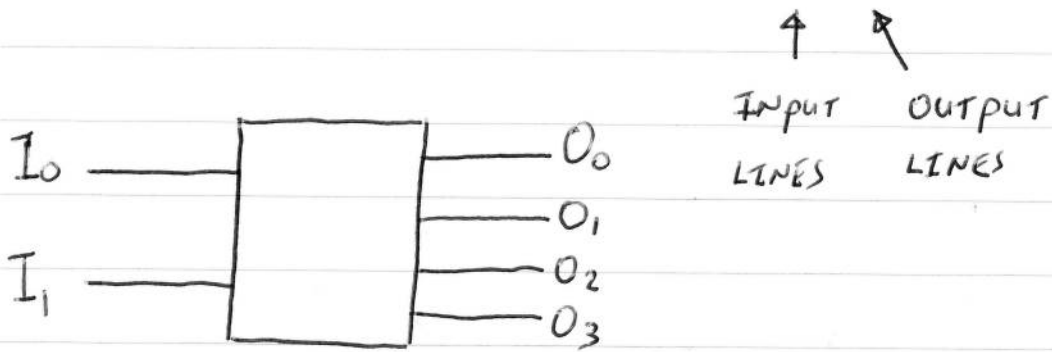


①

## 2-4 DECODER

BLOCK DIAGRAM FOR 2-4 DECODER



TRUTH TABLE FOR 2-4 DECODER

$I_1$	$I_0$	$O_3$	$O_2$	$O_1$	$O_0$
0	0	0	0	0	1
0	1	0	0	1	0
1	0	0	1	0	0
1	1	1	0	0	0

$$O_0 = \bar{I}_1 \cdot \bar{I}_0$$

$$O_1 = \bar{I}_1 \cdot I_0$$

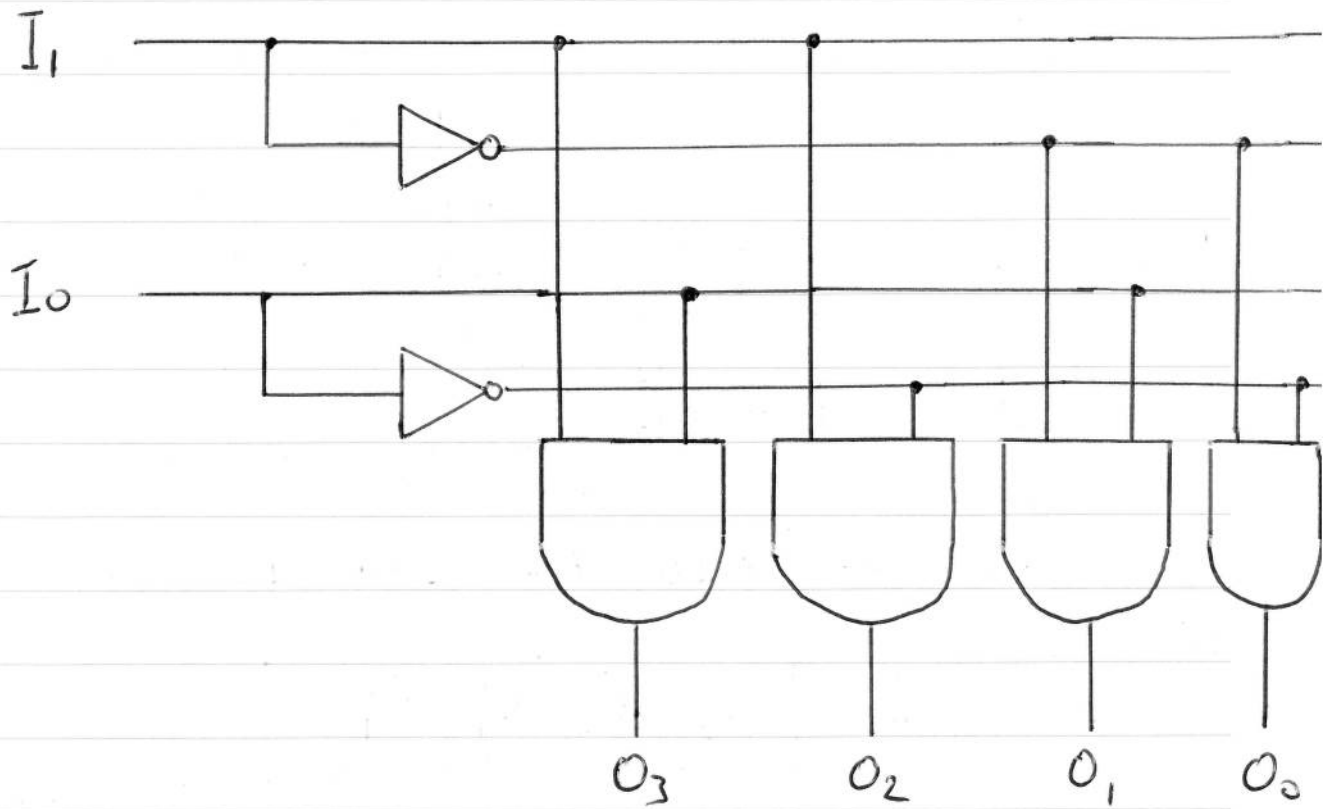
$$O_2 = I_1 \cdot \bar{I}_0$$

$$O_3 = I_1 \cdot I_0$$

WE ARE SELECTING ONLY 1 OF THE  
4 OUTPUT LINES.

(2)

GATE LEVEL DIAGRAM FOR 2-4 DECODER

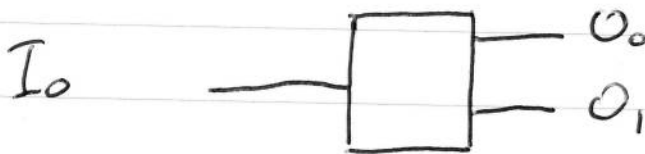


② ③

### EXERCISE

DO THE TRUTH TABLE, BLOCK LEVEL DIAGRAM AND GATE LEVEL DIAGRAM FOR A 1-2 DECODER.

#### BLOCK DIAGRAM



#### TRUTH TABLE

$I_0$	$O_1$	$O_0$
0	0	1
1	1	0

$$\begin{aligned} O_0 &= \overline{I_0} \\ O_1 &= I_0 \end{aligned}$$



