

# Assignment

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**Topic:** Decoder

**Section:** Sec A (Evening)

**Program:** BSSE

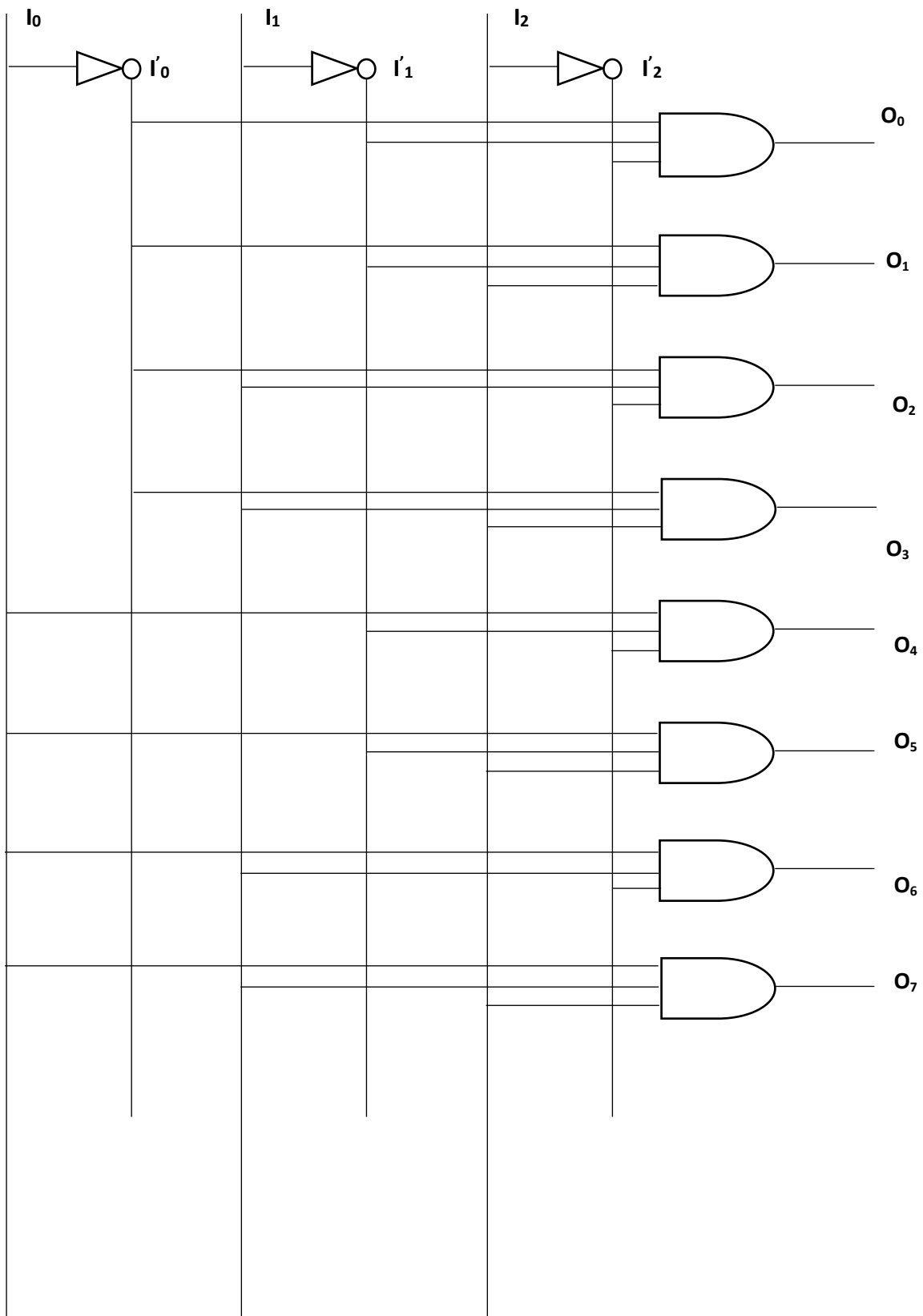
**Q1: Give any example of 3x8 Decoder.**

In 3x8 decoder no of inputs are 3 , so number of outputs will be ,

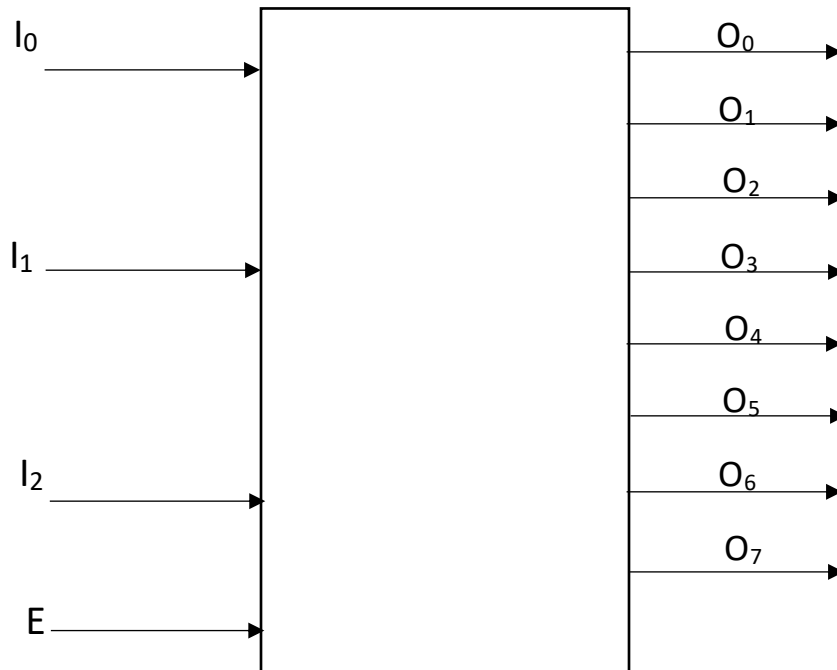
$$n = 3, 2^n = 2^3 = 8$$

$I_0$	$I_1$	$I_2$	$O_0$	$O_1$	$O_2$	$O_3$	$O_4$	$O_5$	$O_6$	$O_7$
0	0	0	1	0	0	0	0	0	0	0
0	0	1	0	1	0	0	0	0	0	0
0	1	0	0	0	1	0	0	0	0	0
0	1	1	0	0	0	1	0	0	0	0
1	0	0	0	0	0	0	1	0	0	0
1	0	1	0	0	0	0	0	1	0	0
1	1	0	0	0	0	0	0	0	1	0
1	1	1	0	0	0	0	0	0	0	1

### Circuit Diagram:



### **Block Diagram:**



### **Q2: Why we use decoder?**

The decoder is a circuit used to change the code into a set of signals. The name itself tells the decoder because it has the reverse of encoding.