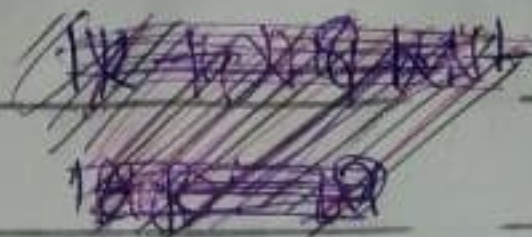


# ~~Quiz~~ LAB-01

25/03/21

4 inputs



4 outputs

A B C D

W X Y Z

0	0	0	0	0	0	0	0
0	0	0	1	1	1	1	1
0	0	1	0	1	1	1	0
0	0	1	1	1	1	0	1
0	1	0	0	1	1	0	0
0	1	0	1	1	0	1	1
0	1	1	0	1	0	1	0
0	1	1	1	1	0	0	1
1	0	0	0	1	0	0	0
1	0	0	1	0	1	1	1
1	0	1	0	0	1	1	0
1	0	1	1	0	1	0	1
1	1	0	0	0	1	0	0
1	1	0	1	0	0	1	1
1	1	1	0	1	0	1	0
1	1	1	1	1	0	0	1



W:

$$(A'B'C'D) + (A'B'CD') + (A'B'CD) + (A'BC'D') + (A'BC'D) + (A'BCD') + (A'BCD) + (AB'C'D)$$

AB \ CD	00	01	11	10
00		1	1	1
01	1	1	1	1
11				
10	1			

$$\begin{array}{r} 0001 \\ 0101 \\ \hline A'C'D \end{array} \quad \begin{array}{r} 0100 \\ 0111 \\ 0101 \\ 0110 \\ \hline A'B \end{array}$$

$$\Rightarrow A'B'C'D' + A'C'D + A'B + A'C$$

$$\begin{array}{r} 0011 \\ 0010 \\ 0111 \\ 0110 \\ \hline A'C \end{array} \quad \begin{array}{r} 1000 \\ \hline ABC'D' \end{array}$$

X:

$$m_1 + m_2 + m_3 + m_4 + m_9 + m_{10} + m_{11} + m_{12}$$

AB \ CD	00	01	11	10
00		1	1	1
01	1			
11	1			
10		1	1	1

$$\begin{array}{r} 0011 \\ 0010 \\ \hline A'B'C \end{array} \quad \begin{array}{r} 0001 \\ 0011 \\ \hline A'B'D \end{array}$$

$$\Rightarrow A'B'C + A'B'D + BC'D' + AB'D + ABC$$

$$\begin{array}{r} 0100 \\ 1100 \\ \hline BC'D' \end{array} \quad \begin{array}{r} 1001 \\ 1011 \\ \hline AB'D \end{array} \quad \begin{array}{r} 1011 \\ 1010 \\ \hline ABC \end{array}$$



$$Y: m_1 + m_2 + m_5 + m_6 + m_9 + m_{10} + m_{13} + m_{14}$$

AB \ CD	00	01	11	10		
00		1		1	0001	0010
01		1		1	0101	0110
11		1		1	1101	1110
10		1		1	1001	1010
					<u>C'D</u>	<u>CD'</u>

$$\Rightarrow C'D + CD'$$

$$Z: m_1 + m_3 + m_5 + m_7 + m_9 + m_{11} + m_{13} + m_{15}$$

AB \ CD	00	01	11	10	
00		1	1		0001
01		1	1		0011
11		1	1		0101
10		1	1		0111
					1101
					1111
					1001
					1011

$$\Rightarrow D$$

$$\underline{D}$$