

# Laboratorio #03

## Ejercicio 01

A	B	C
0	0	0
0	0	1
0	1	0
0	1	1
1	0	0
1	0	1
1	1	0
1	1	1

Tabla #1			
$Y_1$	minterm		max-term
1	$\bar{A}\bar{B}\bar{C}$	$m_0$	$A+B+C$
0	$\bar{A}\bar{B}C$	$m_1$	$A+B+C$
1	$\bar{A}B\bar{C}$	$m_2$	$A+B+C$
0	$\bar{A}BC$	$m_3$	$A+B+C$
1	$A\bar{B}\bar{C}$	$m_4$	$A+B+C$
1	$A\bar{B}C$	$m_5$	$A+B+C$
0	$AB\bar{C}$	$m_6$	$A+B+C$
1	$ABC$	$m_7$	$A+B+C$

Tabla #2		
$Y_2$		
0	$m_0$	$M_0$
1	$m_1$	$M_1$
0	$m_2$	$M_2$
0	$m_3$	$M_3$
0	$m_4$	$M_4$
0	$m_5$	$M_5$
1	$m_6$	$M_6$
1	$m_7$	$M_7$

SOP  $\bar{A}\bar{B}\bar{C} + \bar{A}\bar{B}C + \bar{A}B\bar{C} + \bar{A}BC + A\bar{B}\bar{C} + A\bar{B}C + AB\bar{C} + ABC$

POS  $(A+B+\bar{C})(A+B+C)(A+\bar{B}+C)$

SOP  $\bar{A}\bar{B}\bar{C} + \bar{A}\bar{B}C + \bar{A}B\bar{C} + \bar{A}BC + A\bar{B}\bar{C} + A\bar{B}C + AB\bar{C} + ABC$

POS  $(A+B+C)(A+\bar{B}+C)(A+\bar{B}+C) \vee (\bar{A}+B+C)(\bar{A}+B+\bar{C})$

Aquí  
no  
cabe →



ABCD	min term	max term	Y <sub>3</sub>	Table # 3	Y <sub>4</sub>	Table # 4
0000	$\bar{A}\bar{B}\bar{C}\bar{D}$	$A+B+C+D$	1	$m_0$ $M_0$	1	$m_0$ $M_0$
0001	$\bar{A}\bar{B}\bar{C}D$	$A+B+C+\bar{D}$	1	$m_1$ $M_1$	0	$m_1$ $M_1$
0010	$\bar{A}\bar{B}C\bar{D}$	$A+B+\bar{C}+D$	1	$m_2$ $M_2$	1	$m_2$ $M_2$
0011	$\bar{A}\bar{B}CD$	$A+B+\bar{C}+\bar{D}$	1	$m_3$ $M_3$	1	$m_3$ $M_3$
0100	$\bar{A}B\bar{C}\bar{D}$	$A+\bar{B}+C+D$	0	$m_4$ $M_4$	0	$m_4$ $M_4$
0101	$\bar{A}B\bar{C}D$	$A+\bar{B}+C+\bar{D}$	0	$m_5$ $M_5$	0	$m_5$ $M_5$
0110	$\bar{A}BC\bar{D}$	$A+\bar{B}+\bar{C}+D$	0	$m_6$ $M_6$	1	$m_6$ $M_6$
0111	$\bar{A}BCD$	$A+\bar{B}+\bar{C}+\bar{D}$	0	$m_7$ $M_7$	1	$m_7$ $M_7$
1000	$A\bar{B}\bar{C}\bar{D}$	$\bar{A}+B+C+D$	1	$m_8$ $M_8$	1	$m_8$ $M_8$
1001	$A\bar{B}\bar{C}D$	$\bar{A}+B+C+\bar{D}$	0	$m_9$ $M_9$	0	$m_9$ $M_9$
1010	$A\bar{B}C\bar{D}$	$\bar{A}+B+\bar{C}+D$	1	$m_{10}$ $M_{10}$	1	$m_{10}$ $M_{10}$
1011	$A\bar{B}CD$	$\bar{A}+B+\bar{C}+\bar{D}$	0	$m_{11}$ $M_{11}$	0	$m_{11}$ $M_{11}$
1100	$AB\bar{C}\bar{D}$	$\bar{A}+\bar{B}+C+D$	0	$m_{12}$ $M_{12}$	0	$m_{12}$ $M_{12}$
1101	$AB\bar{C}D$	$\bar{A}+\bar{B}+C+\bar{D}$	0	$m_{13}$ $M_{13}$	0	$m_{13}$ $M_{13}$
1110	$ABC\bar{D}$	$\bar{A}+\bar{B}+\bar{C}+D$	1	$m_{14}$ $M_{14}$	0	$m_{14}$ $M_{14}$
1111	$ABCD$	$\bar{A}+\bar{B}+\bar{C}+\bar{D}$	0	$m_{15}$ $M_{15}$	0	$m_{15}$ $M_{15}$

Table # 3

**SOP**  $\bar{A}\bar{B}\bar{C}\bar{D} + \bar{A}\bar{B}\bar{C}D + \bar{A}\bar{B}C\bar{D} + \bar{A}\bar{B}CD + A\bar{B}\bar{C}\bar{D} + A\bar{B}C\bar{D} + AB\bar{C}\bar{D}$

**POS**  $(A+\bar{B}+C+D)(A+\bar{B}+C+\bar{D})(A+\bar{B}+\bar{C}+D)(A+\bar{B}+\bar{C}+\bar{D})(\bar{A}+B+C+D)$   
 $*(\bar{A}+B+\bar{C}+D)(\bar{A}+B+C+D)(\bar{A}+\bar{B}+C+D)(\bar{A}+\bar{B}+\bar{C}+D)$

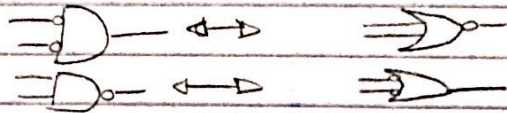
Table # 4

**SOP**  $\bar{A}\bar{B}\bar{C}\bar{D} + \bar{A}\bar{B}C\bar{D} + \bar{A}B\bar{C}\bar{D} + \bar{A}BC\bar{D} + A\bar{B}\bar{C}\bar{D} + A\bar{B}C\bar{D} + AB\bar{C}\bar{D}$

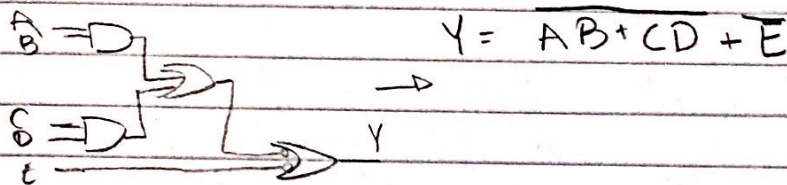
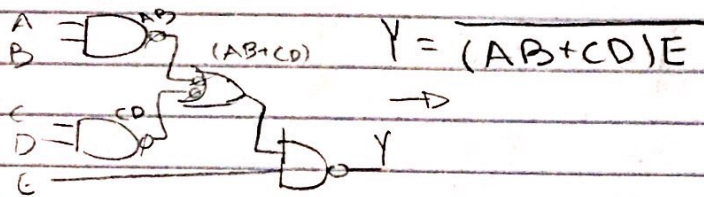
**POS**  $(A+B+C\bar{D})(A+B+C+D)(A+\bar{B}+C+\bar{D})(\bar{A}+B+C+\bar{D})(\bar{A}+B+\bar{C}+\bar{D})(\bar{A}+\bar{B}+C+D)$   
 $*(\bar{A}+\bar{B}+\bar{C}+D)(\bar{A}+\bar{B}+\bar{C}+D)(\bar{A}+\bar{B}+\bar{C}+\bar{D})$



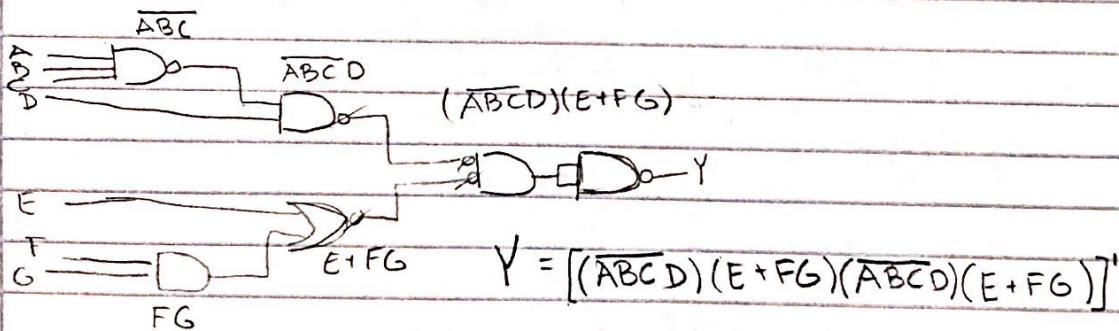
## Ejercicio 04



00



01



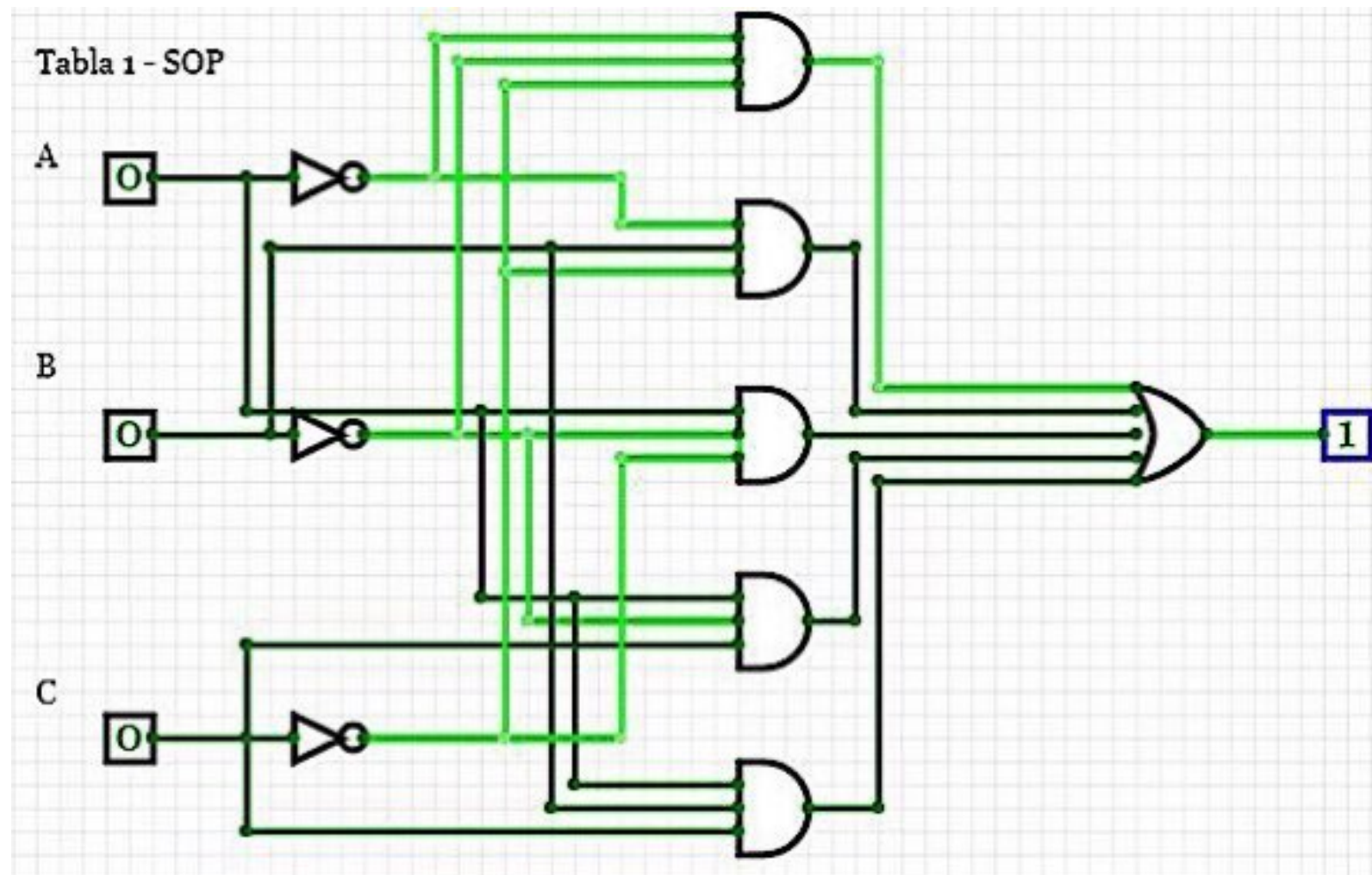
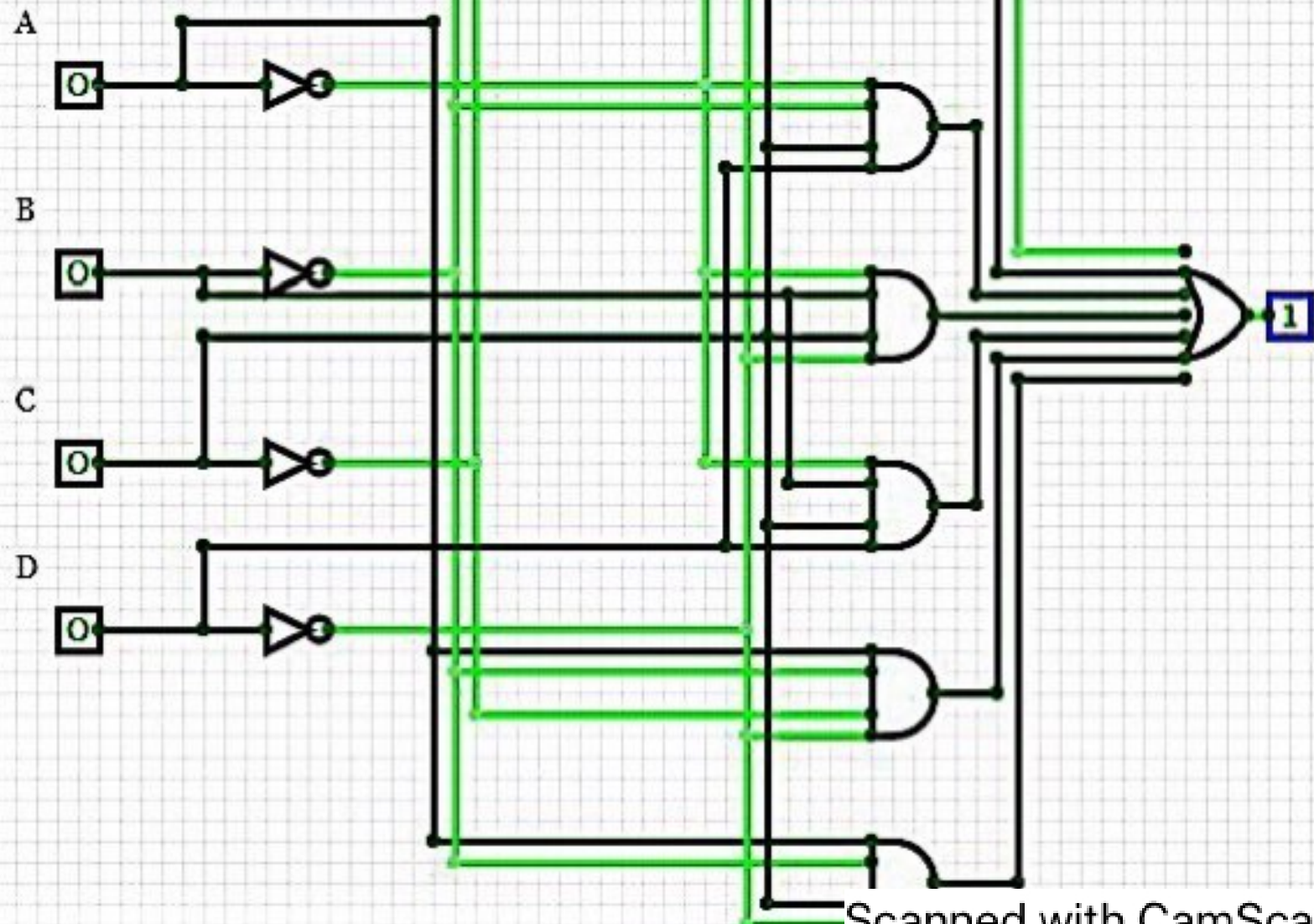




Tabla 4 - SOP



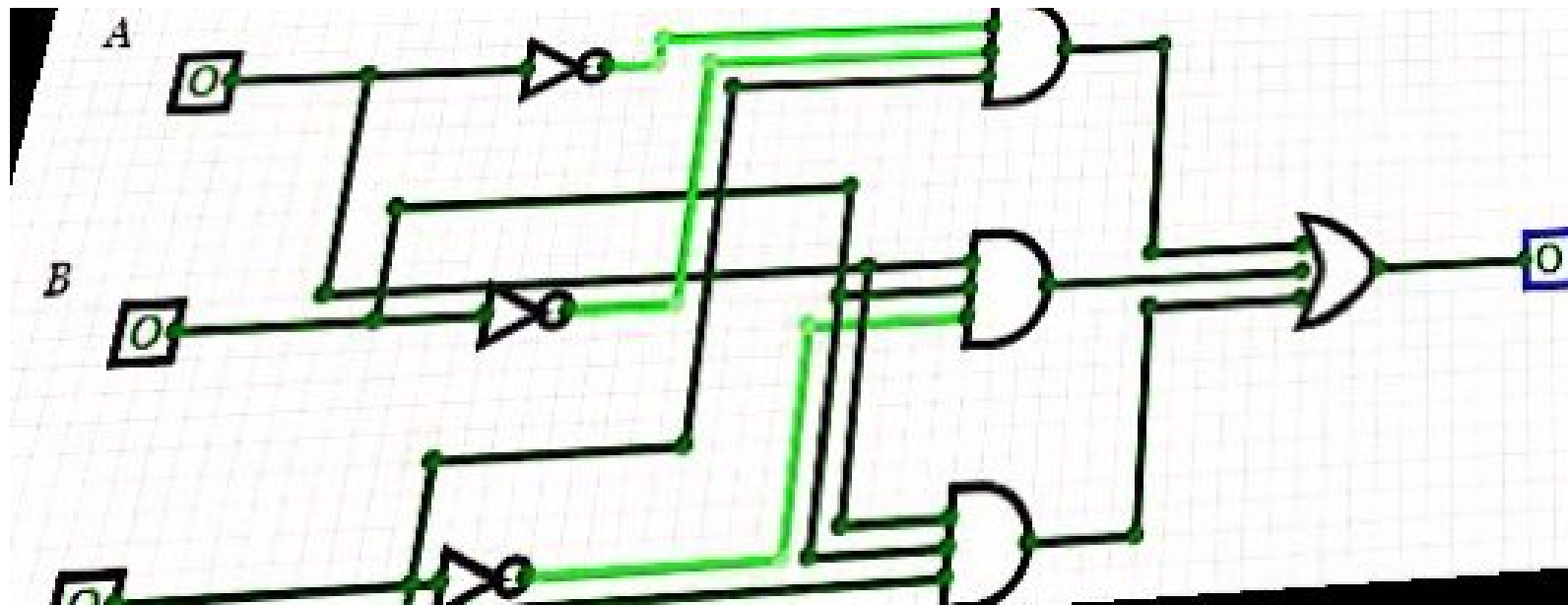


Tabla 3 - SOP

