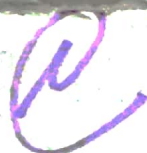


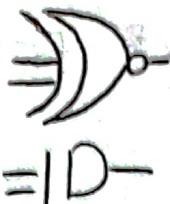
Tarea 2 Vázquez Blancas Cobar Said



Operación Lógica	Forma Algebraica	Tabla de Verdad	Compuerta lógica	Descripción en VHDL	Observaciones															
NOT	$F = \bar{A}$	<table><tr><th>A</th><th>\bar{A}</th></tr><tr><td>0</td><td>1</td></tr><tr><td>1</td><td>0</td></tr></table>	A	\bar{A}	0	1	1	0		$F <= \text{NOT } A;$	Solo tiene una entrada, o solo tiene una variable									
A	\bar{A}																			
0	1																			
1	0																			
OR	$F = A + B$	<table><tr><th>A</th><th>B</th><th>$A + B$</th></tr><tr><td>0</td><td>0</td><td>0</td></tr><tr><td>0</td><td>1</td><td>1</td></tr><tr><td>1</td><td>0</td><td>1</td></tr><tr><td>1</td><td>1</td><td>1</td></tr></table>	A	B	$A + B$	0	0	0	0	1	1	1	0	1	1	1	1		$F <= A \text{ OR } B;$	Se le asignan múltiples variables. En la práctica están limitadas
A	B	$A + B$																		
0	0	0																		
0	1	1																		
1	0	1																		
1	1	1																		
AND	$F = AB$	<table><tr><th>A</th><th>B</th><th>AB</th></tr><tr><td>0</td><td>0</td><td>0</td></tr><tr><td>0</td><td>1</td><td>0</td></tr><tr><td>1</td><td>0</td><td>0</td></tr><tr><td>1</td><td>1</td><td>1</td></tr></table>	A	B	AB	0	0	0	0	1	0	1	0	0	1	1	1		$F <= A \text{ AND } B;$	Se le pueden asignar múltiples variables. En la práctica están limitadas
A	B	AB																		
0	0	0																		
0	1	0																		
1	0	0																		
1	1	1																		
NOR	$F = \overline{A + B}$ $F = (A + B)'$	<table><tr><th>A</th><th>B</th><th>$\overline{A + B}$</th></tr><tr><td>0</td><td>0</td><td>1</td></tr><tr><td>0</td><td>1</td><td>0</td></tr><tr><td>1</td><td>0</td><td>0</td></tr><tr><td>1</td><td>1</td><td>0</td></tr></table>	A	B	$\overline{A + B}$	0	0	1	0	1	0	1	0	0	1	1	0		$F <= A \text{ NOR } B;$	
A	B	$\overline{A + B}$																		
0	0	1																		
0	1	0																		
1	0	0																		
1	1	0																		
NAND	$F = \overline{AB}$	<table><tr><th>A</th><th>B</th><th>\overline{AB}</th></tr><tr><td>0</td><td>0</td><td>1</td></tr><tr><td>0</td><td>1</td><td>1</td></tr><tr><td>1</td><td>0</td><td>1</td></tr><tr><td>1</td><td>1</td><td>0</td></tr></table>	A	B	\overline{AB}	0	0	1	0	1	1	1	0	1	1	1	0		$F <= A \text{ NAND } B;$	
A	B	\overline{AB}																		
0	0	1																		
0	1	1																		
1	0	1																		
1	1	0																		
XOR	$F = A \oplus B$ $F = A \cdot \bar{B} + \bar{A} \cdot B$ $F = A \odot B$	<table><tr><th>A</th><th>B</th><th>$A \oplus B$</th></tr><tr><td>0</td><td>0</td><td>0</td></tr><tr><td>0</td><td>1</td><td>1</td></tr><tr><td>1</td><td>0</td><td>1</td></tr><tr><td>1</td><td>1</td><td>0</td></tr></table>	A	B	$A \oplus B$	0	0	0	0	1	1	1	0	1	1	1	0		$F <= A \text{ XOR } B;$	OR-exclusiva. Solo tiene 2 variables de entrada, no hay más
A	B	$A \oplus B$																		
0	0	0																		
0	1	1																		
1	0	1																		
1	1	0																		

Tarea 2

Vázquez Blancas César Sard

Operación Lógica	Forma Algebraica	Tabla de Verdad	Compuerta Lógica	Descripción en VHDL	Observaciones															
XNOR	$F = \overline{A \oplus B}$ $F = AB + \overline{A}\overline{B}$ $F = A \odot B$	<table><tr><th>A</th><th>B</th><th>$A \odot B$</th></tr><tr><td>0</td><td>0</td><td>1</td></tr><tr><td>0</td><td>1</td><td>0</td></tr><tr><td>1</td><td>0</td><td>0</td></tr><tr><td>1</td><td>1</td><td>1</td></tr></table>	A	B	$A \odot B$	0	0	1	0	1	0	1	0	0	1	1	1		$F <= A \text{ XNOR } B;$ $F <= \text{NOT}(A \text{ XOR } B);$	Tiene solo 2 entradas
A	B	$A \odot B$																		
0	0	1																		
0	1	0																		
1	0	0																		
1	1	1																		