ECE - 448 Lab Section - 201

Lab Assessment 2

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G Number: G00971964

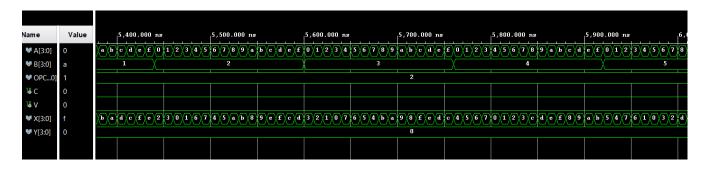
## NOR:

		0.000 ns					
Name	Value	0.000 ns 50.000 ns	100.000 ns   150.000 ns	200.000 ns 250.000 ns	300.000 ns 350.000 ns	400.000 ns 450.000 ns	500.000 ns 550.000 ns 600.000 ns
> ₩ A[3:0]	0	0 1 2 3 4 5 6 7 8 9	a b c d e f 0 1 2 3	4 5 6 7 8 9 a b c d	e f 0 1 2 3 4 5 6 7	8 9 a b c d e f 0 1	2 3 4 5 6 7 8 9 a b c d e f
> 💆 B[3:0]	0	0	΄ Χ	1	2	2	3
> W OPC0]	0	(			0		
₩ C	0						
18 V	0						
> ₩ X[3:0]	f	f e d c b a 9 8 7 6	5 4 3 2 1 0 e c	a 8 6 4 2	0 (d)c (d)c (9 (8 (9 )8	5 4 5 4 1 0 1 0	c
> <b>W</b> Y[3:0]	0				0		

### NAND:

Name	Value	4,100.000 z	ıs	4,200.000 ns		4,300.000 ns		4,400.000 ns		4,500.000 ns		4,600.000	ns
> <b>W</b> A[3:0]	4	6789abcd	$\mathbf{f} \left\langle 0 \right\rangle 1 \left\langle 2 \right\rangle 3$	4 5 6 7 8	9 (a )b (c (d	e f 0 12	3 4 5 6 7	8 /9 /a /b /c	d e f 0/1	2 3 4 5 6	7 8 9 a b	c d e f	0 1
> <b>W</b> B[3:0]	0	9	X	a		X		b	Х		c	<u> </u>	
> <b>W</b> OPC0]	0						1						
™ C	0												
16 V	0												
> <b>W</b> X[3:0]	b	f e 7 6 7 6 7 6	7 6 f d	fd	7 5 7	5 \f\e\d	c f e d c	7 6 5 4 7	6 \ 5 \ 4 \	f b	7	3	f e
> <b>W</b> Y[3:0]	0						0						
					l———	ļ					<b> </b>		

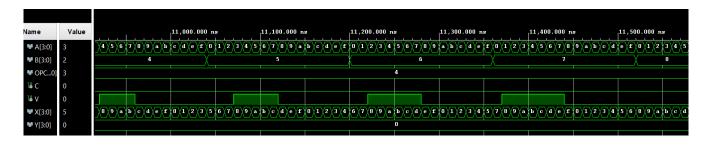
## XOR:



### ADDU:

Name	Value		1		8,0	00.00	)0 ns				8,10	0.00	0 ns				8,200	.000	ns			8,3	00.0	00 n	s			8,40	0.000	ns			. 1	8,500	.000	ns
₩ A[3:0]	8	7 8 9 a	b c	d e /i	χoχ	1 (2)	3 4	XEX	6 7	8 9	a b	<u> </u>	d (e	f (0	χīχ	2 3	4 5	6 7	8 9	)(a)(l	) (c) (c	ı (e)	£ 0	XI X	2 3 /4	)(5)	6 7	8 9	(a b	X	d e	Œ (O	ΧΞX	2 3	4 5	6 7
₩ B[3:0]	2		1		Х				2					$\mathbb{I}$				3					$\mathcal{X}$					4				$\Box \chi$			5	
<b>₩</b> OPC0]	2																		3																	
18 C	0																																			
18 V	0																																			
₩ X[3:0]	a	8 9 a b	c /d/	e (f)	2	3 (4)	5 (6	\7\/	8 \ <mark>9</mark> \	a /b	c d	\(\frac{1}{2}\)	f (O	1 (3	(4)	5 (6	7 (8	9 (a)	b c	\d\(\ell_{\ell}\)	)f)(	ıχıχ	2 4	\(\sigma\)(6	7/1	(P)	a /b	c d	(e)f	χο,	1 (2	(3)(5	<b>\6</b>	7 (8)	9 (a	b c
₩ Y[3:0]	0																		0																	

## ADDS:



## SUBS:

Name	Value		13,70	0.00	0 ns				13	,80	0.00	0 n	s				13,	900	.00	0 ns				1	4,00	0.0	100	าร			.  1	14,1	00.	000	ns				14,	200	. 000	ns				14	1,300.
₩ A[3:0]	3	7 (8 (9)	(a (b)	c d	Xe (	EΧO		2 / 3	(4)	( <u>-</u> )	6 7	<del>\(\)</del> 8	9	a (I	b (c	χœ	eχ	£ (0	χī	<u>/2</u>	<u> </u>	· )(5	<u>(6)</u>	7 (8	<b>\(\9\)</b>	(a)	b c	$\langle \mathbf{d} \rangle$	œ(i	(0)	$\overline{\mathbb{C}}$	2 3	$\langle 4 \rangle$	<del>O</del> X	6 7	(8)	9 X	a /b	Įοχ	d (e	χĒ	<b>0</b> (	1χ.	X		5 6	7/8
₩ B[3:0]	2		5			X						6						$\supset X$						7						$\chi$						8						C			١	9	
<b>₩</b> OPC0]	3																								5																						
™ C	0																																														
18 V	0																																														
₩ X[3:0]	5	2 3 4	(5 \(6\)	7 (8	X9 (	a	<b>(b)</b>	c (d	(e)	(E)	0 \( 1	<u>/2</u>	(3)	4	5 (6	X	8	9	\(\a	<b>(b)</b>	• X	l (e	(E)	0 1	$\langle 2 \rangle$	( <b>3</b> )	4 \( 5	(6)	(7)(	8	9	a (b	$\langle e \rangle$	d	e £		ΞX	2 \( \)3	¥ΦX	5 (6	χ	$\exists$ X	8 /(9	)(a)	(b)(e	o d	$\langle e \rangle \langle f \rangle$
₩ Y[3:0]	0																								0																						

### **MULTIU:**

Name	Value	16,600.000 ns	16,700.	000 ns	16,800.000 n	s	16,900.000 ns	17,000.000 n	s 17,100.0	000 ns 17,200.000 ns
₩ A[3:0]	3	b c d e f 0	1 2 3 4 5 6 7 8	9 a b c de f	0 1 2 3 4	5 6 7 8 9	a b c d e f	0 1 2 3 4 5 6 7 8	9 a b c d e f 0	1 2 3 4 5 6 7 8 9 a b c d
₩ B[3:0]	2	7	8		X	9		) a	` Х	b
<b>₩</b> OPC0]	3						6			
1⊌ C	0									
¼ V	0									
₩ X[3:0]	5	(d   4   b   2   9   0	8 \ 0 \ 8 \ 0 \ 8 \ 0 \ 8 \ 0	8 \ 0 \ 8 \ 0 \ 8 \ 0 \ 8	0 \9 \2 \b \4	d (6 (f (8 (1	a 3 c 5 e 7	$\sqrt{0}$ $\sqrt{a}$ $\sqrt{4}$ $\sqrt{e}$ $\sqrt{8}$ $\sqrt{2}$ $\sqrt{c}$ $\sqrt{6}$ $\sqrt{0}$	a 4 e 8 2 c 6 0	b 6 1 c 7 2 d 8 3 e 9 4 f
₩ Y[3:0]	0	d e f 0	f e d c4	3 2 1	0 f e	d c 3	2 1 0	f e d 3	2 1 0	f e d 2 1

# **MULTIS:**

