Cpr E 281 MINI PROJECT ELECTRICAL AND COMPUTER ENGINEERING IOWA STATE UNIVERSITY

Mini Project Answer Sheet

Name and Student ID:	Lab Section:
Date:	
PRELAB:	
Read the Mini-Project lab document and complete as much of this a can before lab.	answer sheet as you
TA Initials:	
LAB:	

4.0 Draw Uncle Bob's circuit below, using only AND, OR, and NOT gates.

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'erilog code which implements this behavior:
(W, X, Y, Z) =
'erilog:
amonetration of Quartus Possilts:

5.0 Give the shorthand canonical SOP expression for Uncle Bob's circuit and then the

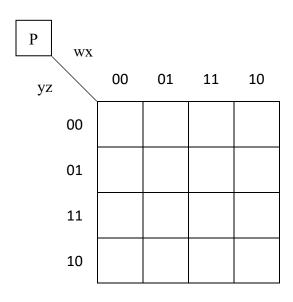
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6.0 Truth table for Uncle Bob's function B and the 4-bit prime detector function P.

W	Х	Y	Z	В	Р
0	0	0	0		
0	0	0	1		
0	0	1	0		
0	0	1	1		
0	1	0	0		
0	1	0	1		
0	1	1	0		
0	1	1	1		
1	0	0	0		
1	0	0	1		
1	0	1	0		
1	0	1	1		
1	1	0	0		
1	1	0	1		
1	1	1	0		
1	1	1	1		



Simplified SOP Expression:

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7.0 Give your implementation of the correct 4-bit prime detector circuit (P) below as either Verilog or a schematic (your choice). Then demonstrate the results:				
Demonstration of ModelSim Results:				

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8.0 Design and implement a circuit that uses Uncle Bob's circuit but fixes his mistakes. Draw it below and demonstrate the results:
Demonstration of ModelSim Results:
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