

Name and Student ID: _____ Lab Section: _____

Date: _____

PRELAB:

Q1. Read section 3.0 and fill in the truth table below for Design 1 (*the farmer's problem*). Then use it to construct the POS expression.

Cabbage	Goat	Wolf	Alarm
0	0	0	
0	0	1	
0	1	0	
0	1	1	
1	0	0	
1	0	1	
1	1	0	
1	1	1	

POS Logic Expression: _____

TA Initials: _____

Q2. Read section 4.0 and fill in the truth table below for Design 2 (*adding the farmer*). Then use it to construct the SOP expressions.

Farmer	Cabbage	Goat	Wolf	Alarm
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	

Canonical SOP Logic Expression: _____

Simplified SOP Logic Expression: _____

TA Initials: _____

LAB:

3.0 Simulation results demonstrate correct code. TA Initials:
 Schematic (FPGA) _____
 Structural (ModelSim) _____ Behavioral (ModelSim) _____

4.0 Simulation results demonstrate correct code. TA Initials: _____