**CpE 2210 Homework Assignment #2**

HW#2 is meant to provide sample problems for the first exam and will not be collected for grading. Be sure to try to solve the following questions yourself before checking solutions posted.

1. Simplify to using algebraic reduction rules. Show every reduction step and reduction rule used.

2. Construct truth table of .

3. Draw logic diagram of .

4. Simplify using algebraic reduction rules. Show every reduction step and reduction rule used.

5. A clock signal has a period of T=0.25μs. Find its frequency.

6. When comparing two desktop computers, you note that one operates with a clock frequency of 600MHz, while another comparable unit has a central clock of 800MHz. What is the percent decrease in the length of the clock period when going from the 600MHz system to the 800MHz system?

7. Construct a logic diagram for the function



using NOR gates only.

8. Construct a logic diagram for the function



using NAND gates only.

9. Construct a logic diagram for the function shown in problem 7 using IEEE logic symbols.

10. Construct a logic diagram for the function shown in problem 8 using IEEE logic symbols.