

Lab 06: Quiz 2 Review

For lab, continue the activity from class — select an outcome or two from the Quiz 2 list and come up with a question that tests one's knowledge of the topic. Write out the question and answer and hand it in. (This lab will not be graded.)

In addition, here are some questions that you can study; the answers will be discussed in lab.

1. (a) Write a propositional formula over A , B , and C that is true iff exactly two of A , B , C are true (and the third is false). (b) Draw a truth table for your formula. (c) Draw a logic gate diagram for your formula.
2. In an R - S latch in lecture, the R and S inputs can be 0 or 1. Which of the four possible R - S input combinations do we avoid and why?
3. Say main memory is byte-addressable and has 12-bit addresses. (a) How many memory locations are there? (b) How many bits per memory location? (c) What kind of circuit do we need if we want to take an address and send a 1 along the line to the one unique memory location indicated by the address? (d) How many inputs and outputs does this circuit have?