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Engineering 210
Quiz #4
Post-Mortem

Class,

Quiz #4 is done and finalized. All papers have been graded and returned in Glennan 308. Please check blackboard for errors and contact me if there are any.

The solutions for quiz #4 are posted on the website.

The average for quiz #4 was 11.91. Scores ranged from 2 to 20. Some reoccurring mistakes:

- By far the biggest problem was determining the node voltages in Problem #1. Most students correctly wrote the KCL equation for node C. However, most students had problems with the voltage sources connected to nodes A and B. A voltage source is a constraint. The 10 volt voltage source connected between node A and ground constrains node A to be 10 volts. For part (a) the 5 volt voltage source also constrains the voltage difference between nodes A and B to be 5 volts. Since node A is 10 volts this constrains node B to be +10-5=+5 volts. For (b) the voltage at node A continues to be constrained to +10 volts by the voltage source. Using V_A=+10 and doing KCL at node B will then give you the equation for V_B. Only a few students got the problem completely right. Review the quiz solutions and be sure you understand the role of voltage and current sources in node voltage and mesh current analysis — this subject will be on future quizzes. Multiple source constraints appear in many Chapter 3 homework problems —for example, see problems 3-8, 3-13, 3-17 and 3-20.
- Some advice I can give to students in node voltage analysis is to label the circuit completely, write out the equations before plugging in numbers, and always follow passive sign convention. See the solutions for the correct method.
- There were very few problems with Problem #2. See the solutions if you did not do well.