CSCI 1320 Midterm Review Sheet

The test is going to be a 50 minute exam with 10 questions on it. The questions will be similar to those on the quizzes. The make-up of the test will be 4 short answer questions, 3 coding questions, and 3 tracing questions. There will be varying levels of difficulty in the questions. The test is cumulative over all the material we have covered so anything we have talked about or that was in the reading can appear on it. Below I list the topics that stand out to me, and what you probably need to know about them. I can't promise that the test material will follow this perfectly, but I will try to make it do so.

Basic model of computation
  How does a computer work in the most simple of terms?
Basic Linux Commands
  By this point the basics should be second nature to you.
  I'm not going to ask about vi commands.
Data Representation
  Binary, Hex, and Octal and conversion between them.
  Addition, bitshifting, and multiplication using bitshifting in binary.
  2s compliment negative numbers and how to find them.
  Basics of fractional values in binary, no floating point, how would you write 3.75 in binary?
C Basics
  Know about expressions and statements in C.
  Variable declarations and something of their semantics.
  Building complex expressions with operators.
  Assignment in C.
C Input and Output
  Know the syntax and basic usage of printf and scanf.
Functions
  You need to understand the concept of breaking problems up into pieces.
  Know what the signatures of functions are and how to write them.
  Understand formal vs. actual arguments and the semantics of pass by value.
Conditional statements
  Know the syntax of if and switch statements and what they can do and are used for.
  Boolean expressions, comparisons, and building complex expressions with logic operators.
  Know how to combine conditionals with functions to produce basic recursion.
Repetition
  Know the fundamental aspects of any loop and the main types of loops.
  While, for, and do/while loop syntax and usage.
  Know the main parts of looping structures in C and the strengths of each type of loop.
  Know how you can use recursion to produce repetition.

For all language features, you need to know how to use them both in writing code and be able to trace code that involves them.