Study guide for CS150 first midterm exam

By now, you should be able to interpret or write a Java program that uses any of the items shown below.

1) Introduction to Computers / Programming
   a. Components of a computer
   b. Interpreting / Compiling source code
   c. What is a JDK? IDE? What are they used for
   d. Operating Systems – what is their purpose?
   e. Bytecode
   f. Syntax / Code Style

2) Java programs
   a. Writing a class with main method
   b. Importing packages
   c. Declaring and initializing variables
   d. Assignment statements
   e. Numeric, character, and string literals
   f. Increment / Decrement operators

3) Data types (and size in bits)
   a. byte (8), short (16), int (32), long (64)
   b. float (32), double (64)
   c. boolean, char (16)
   d. Type widening / narrowing (casting)
   e. Integer division

4) Expressions
   a. Primitive operators: *, /, +, -, %, +, --
   b. Integer versus floating point math
   c. Relational operators: ==, !=, <, <=, >, >=
   d. Boolean operators: &&, ||, ^, !
   e. Order of operations, parentheses
   f. Mixed types and type casting

5) Writing to the console
   a. Using System.out.print/println/printf
      √ Differences between them
   b. Combining literals and variables

6) Reading from the console
   a. Declaring and use a Scanner
   b. Reading integers and doubles: nextInt, nextDouble

General concepts you should be familiar with:
   a. Naming conventions
   b. Software development process