Study guide for first CS160 midterm exam

By now, you should be able to interpret or write a Java program that uses any of the items shown below. In addition you should know the function of basic computer components (processor, main memory, auxiliary memory, I/O devices) and be able to describe the roles of the Java compiler and virtual machine.

1) Java Programs
   a. Writing a class
   b. Writing the main method
   c. Declaring variables
   d. Initializing variables
   e. Assignment statements
   f. Numeric, character, and string literals

2) Write to the console:
   a. Using System.out.print
   b. Using System.out.println
   c. Difference between them
   d. Combining literals and variables
   e. Formatted output using DecimalFormat

3) Read from the console:
   a. Declaring and use a Scanner
   b. Strings that are single tokens
   c. Strings that are lines of characters
   d. Integers
   e. Doubles

4) String functions
   a. length
   b. charAt
   c. indexOf
   d. equals (and know why == doesn’t work)
   e. concatenation

5) Data types
   a. int
   b. double
   c. boolean
   d. char
   e. String

6) Expressions
   a. Primitive operators (*, /, +, -, %, ++, --)
   b. Order of operations, parentheses
   c. Mixed types and type casting

7) Conditionals
   a. if, if-else, and else statements
   b. switch statements

8) Loops (and when to use each).
   a. while
   b. do while
   c. for

9) Classes
   a. Defining a class
   b. Instantiating an object from a class

10) Methods
    a. Defining and calling a method
    b. Return values and types, including void
    c. Argument values and types
    d. Public versus private