Study guide for CS150 second midterm exam

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

1) 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

2) String functions
   a. length, charAt, indexOf, substring
   b. String concatenation: concat, +
   c. String comparison: equals (== doesn’t work!)

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

4) Reading from the console
   a. Declaring and use a Scanner
   b. Reading strings that are single tokens: next
   c. Reading strings that are lines of text: nextLine
   d. Reading integers and doubles: nextInt, nextDouble

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

6) Wrapper Classes
   a. Integer: parseInt()
   b. Double: parseDouble()
   c. Character: isUpperCase(), isDigit(), isLetter()

7) Math
   a. Math constants: PI
   b. Math methods:
      - sqrt()
      - pow()
      - min(), max()
      - round(), floor(), ceil()

8) Control Loops
   a. for loops
   b. while loops
   c. do/while loops
   d. break keyword
   e. continue keyword

9) Privacy / Security
   a. Authentication
   b. Authorization
   c. Malware
   d. Worm vs. virus vs. trojan horse