COSC 111 Concept Questions

1. What is the relationship between an algorithm and a computer program?
2. What does it mean to say that Java statements have to follow a defined syntax?
3. Explain what a compiler does with your source code.
4. The byte code produced by the compiler is executed on what? Explain briefly what this think is.
5. Name three primitive data types.
6. What is the relationship between a String and a char (character variable)?
7. Give an example of a number that can’t accurately be stored in an int variable.
8. What semantic implication does the statement, “j = k \* 10;” have?
9. In Java you can say, “x = x + 1;” which is mathematical nonsense. What’s really happening when this statements executes?
10. If I force the number -10.8 into an int variable, what will end up being stored?
11. To truncate means to chop something off. What does this mean in Java?
12. What do ASCII codes and Unicode have in common (think purpose)?
13. Where do your program and data reside while your program is executing?
14. What is the “workhorse” of the computer, the hardware device that actually executes instructions?
15. If you have a variable called total in which you’d like to accumulate a sum, what do you have to do before you begin adding values into it?
16. What is the purpose of a type cast?
17. If you want to store values like -15.34, 1254.001, 23.0, or -0.0001, what type should you use?
18. Why is a loop index almost always an int?
19. What does the compiler do with comments (words after “//” or between /\* and \*/)?
20. What operations on data files make them available for reading and then conclude the interactions?