CST8110: Introduction to Computing: Winter 2008: Quiz 1: Solution

Answer all questions first on this paper. Once you have finished answering, transcribe your answers to the green mark-sense cards, using only a pencil. You will submit your mark sense cards, but keep the quiz paper. Following the lecture, you can check your answers with those posted on my website.

1. A comment (which runs to the end of the current line) begins with:
   a) // b) || c) \\ d) **#** e) **&&**
2. On our computers, the size of an **int** in bytes is:
   a) 1 b) 2 c) 4 d) 6 e) 8
3. On our computers, the size of a **double** in bytes is:
   a) 1 b) 2 c) 4 d) 8 e) 10
4. Choose the item that lists data types that are members of the *integer family*:
   a) **int double long char**
   b) **unsigned int long char int**
   c) **integer short long char**
   d) **float double long unsigned int**
   e) **int void long char**
5. Choose the item that lists data types that are members of the *floating-point family*:
   a) **float double long**
   b) **floating double long double**
   c) **float double double double**
   d) **short float double long**
   e) **float double long double**
6. Which of the following is NOT a valid **int**?
   a) -1812
   b) 111001011
   c) 200000000
   d) 5000000000
   e) all of the above are valid.

The next three questions deal with the terms *define*, *declare* and *initialize*. In each case the five possible answers are repeated without modification.

7. When you *define* a variable, what does the computer do?
   a) Gives the variable its starting value.
   b) Allocates space in memory (probably RAM). The memory will be used to store values.
   c) Announces the name of the variable and its data type (that is, what kind of variable it will be).
   d) Loads the variable into the Arithmetic Logic Unit (ALU).
   e) Items a), b) and c).
8. When you *initialize* a variable, what does the computer do?
   a) Gives the variable its starting value.
   b) Allocates space in memory (probably RAM). The memory will be used to store values.
   c) Announces the name of the variable and its data type (that is, what kind of variable it will be).
   d) Loads the variable into the Arithmetic Logic Unit (ALU).
   e) Items a), b) and c).
9. When you *declare* a variable, what does the computer do?
   a) Gives the variable its starting value.
   b) Allocates space in memory (probably RAM). The memory will be used to store values.
   c) Announces the name of the variable and its data type (that is, what kind of variable it will be).
   d) Loads the variable into the Arithmetic Logic Unit (ALU).
   e) Items a), b) and c).
10. When the CPU is operating on a variable:
    a) The control unit uniquely identifies a variable's location in RAM by its address..
    b) The arithmetic logic unit (ALU) uniquely identifies a variable's location in RAM by its address.
    c) The CPU can add or subtract values from the variable while it remains in RAM.
    d) The variable's value moves across the address bus..
    e) none of the above.
11. The value of **-1** is:
    a) true b) false c) undefined
12. Which of the following C++ statements increases the value stored in the variable **nTemp** (increasing by **23**)?
    a) **nTemp + 23;**
    b) **nTemp = 23;**
    c) **23 += nTemp;**
    d) **nTemp = nTemp + 23;**
    e) none of the above.
13. You use **#include** to:
    a) Tell the compiler where program execution begins.
    b) Declare and define your variables.
    c) Add comments to your program.
    d) Tell the linker how to assemble all parts of your project.
    e) Open the file that's named by the **#include**, and insert the code in your program.
14. What does **27 % 7** evaluate to?
    a) 2 b) 6 c) 7 d) 3 e) none of the above.
15. Given **n1 = 3**, **n2 = 7**, **n3 = 5** and **n4 = 17**, what is the result of **(n1 > 3 || n2 < 10) && (n3 != 5 || n4 == 13)** ?
    a) errors: won't compile b) 31 c) true d) false
    e) none of the above.
16. Given **int n1 = 11; int n2 = 2;** What does **n1 / n2** evaluate to?
    a) 5.5 b) 6 c) 5 d) 5.4999... e) errors: won't compile.