

## CS 161 Quiz 8 Solution

- 1) \_\_\_\_\_ local variables retain their value between function calls.

**Static** local variables retain their value between function calls. All other local variables are re-created each time the function is called.

- 2) \_\_\_\_\_ arguments are passed to parameters automatically if no argument is provided in the function call.

**Default** arguments are used to initialize parameters if no argument is provided in a function call. An example is:

```
int myfun(int x, int y = 3);
```

If this is called with two arguments, the second one is used for y. If it is called with one argument, then the value 3 is used for y.

- 3) The value of a default argument must be a \_\_\_\_\_.

Since the compiler needs to know the value of a default argument at compile time, it must be a **constant** or a **literal constant**. It cannot be a variable.

- 4) The \_\_\_\_\_ function causes a program to terminate immediately.

The **exit()** function causes immediate termination of the program when it is executed.

- 5) Reference variables are defined like regular variables, except there is a \_\_\_\_\_ in front of them.

To indicate that a variable is a reference variable, you place an **ampersand, &**, in front of it.

6) An advantage of breaking your program's code into several small functions is:

B. To make your program easier to design, code, test, and debug; since each function does just one small task.

There is added overhead to using functions, so having them does not make the program faster, instead it slows it down slightly.

Global variables are bad in general, since they contribute to bugs that are hard to find and fix.

7) If you are writing a function that accepts an argument and you want to make sure the function cannot change the value of the argument, what should you do?

When you use **pass by value**, the arguments are copied and cannot be modified by the called function.

Alternately, if you use pass by reference, the called function is given the address in memory of the initial argument and can modify it, unless it is a constant pass by reference.

8) How do you normally return a value from a function?

You should use a **return statement** to return a value from a function.

9) When should a static local variable be used?

You should use a static local variable **when the local variable needs to retain** its value between function calls.

10) True or False. When a function accepts multiple arguments, it matters what order the arguments are passed in.

This is true. Arguments are assigned to parameters in the order in which they appear. The first argument is assigned to the first parameter and so on.