

# COMP201 — Principles of Programming

Semester I 2009–2010

## Quiz #1

Student ID: \_\_\_\_\_ Name: \_\_\_\_\_ Score: \_\_\_\_\_

**Part I: Multiple Choice. Select one best answer. 1 point per item**

1. Computer languages designed to be used and understood by humans are:

- ☐ Natural languages
- ☐ High-level computer languages
- ☐ Machine languages
- ☐ Fetch-execute languages

2. Which of the following is definitely not true for comments?

- ☐ In Python, they begin with a pound sign (#)
- ☐ They make writing a program more efficient.
- ☐ They are intended for humans.
- ☐ A program runs faster if it is commented well.

3. Fill in the blanks:

The syntax of a language is its \_\_\_\_\_, and the semantics of a language is its \_\_\_\_\_.

- ☐ meaning, grammar
- ☐ style, meaning
- ☐ grammar, meaning
- ☐ complexity, speed

4. The items listed in the parentheses of a function definition are called:

- ☐ parentheticals
- ☐ parameters
- ☐ comments
- ☐ scripts

5. Fill in the blanks: An algorithm is to programming as \_\_\_\_\_ is to \_\_\_\_\_.

- ☐ ingredients, meal
- ☐ notes, music
- ☐ recipe, cooking
- ☐ bus routes, transportation

**Part II: Programming**

**IMPORTANT:** This programming environment is not the same as the one that you are using in class. To save and compile your programs, follow the instructions below:

- Log onto the machine with the following information:
  - Location: ShortCourse
  - Username: `s` + *student id*. For example, if your student ID is 09123456d, log in with the user name `s09123456d`. All lowercase letters.
  - Password: `comp201`
- Run `nalwin32` and get to Python just like you do in class.
- JEdit 4.2 should be available directly from the **Start** menu, or on your desktop, or from `nalwin32`.
- **Save your programs onto the J: drive. Do not create any subfolders.** We will be using a program to collect your programs, and if you don't save it in the correct place, we won't be able to get it and you will get no marks.

6. (10 marks) The *body-mass index* (BMI) of a person is what health experts use to decide whether a person is overweight or underweight. It calculates the ratio of body fat to height. The formula for calculating the BMI is:

$$BMI = \frac{\text{weight in kg}}{\text{height in meters}^2}$$

Write a function, `bmi()`, that will accept the weight (in kilograms) and the height (in meters) as parameters, and output the user's BMI. A sample run of your function should look like this:

```
>>> bmi(60, 1.65)
The BMI is 22.0385674931
>>> bmi(75, 1.8)
The BMI is 23.1481481481
```

Your function should be saved in a program called `bmi.py` on your J: drive.

**-End-**