CMP167 – Quiz #07

Instructor: Michael Iannelli

Name: _____

Results: _____

Class: _____

Date: _____

1. What Python reserved word starts with a class definition?
   a. def
   b. class
   c. object
   d. __init__

2. A method definition is similar to a(n):
   a. loop
   b. module
   c. import statement
   d. function definition

3. What does the following expression evaluate to:
   not a and (b or c) == (a and b) or (a and c)

   True or False (I accepted either answer)

4. New objects are created by invoking a constructor
   a. True
   b. False

5. Functions that live in objects are called instance variables
   a. True
   b. False

6. An object may have only one instance variable
   a. True
   b. False

7. In a Python class, the constructor is called __init__
   a. True
   b. False

8. Within a method definition, the instance variable x could be accessed via which expression:
   a. x
   b. self.x
   c. self[x]
   d. self.getX()

9. What is the difference between instance variable and "regular" function variables?

   Instance variables "live" on the object and persist through the object's life. "Regular" function variables only live as long the program is in its respective function.

Extra Credit: Write a class to represent the geometric solid sphere. Your class should implement the following methods:

- __init__(self, radius): creates a sphere of given radius
- get_radius(self): Returns the radius of this sphere
- surface_area(self): Returns the surface area of the sphere
- volume(self): returns the volume of the sphere

$$Surface\ Area\ of\ Sphere = 4 * \pi * r^2$$

$$Volume\ of\ Sphere = \frac{4}{3} * \pi * r^3$$

Use the back of this page for your answer.