CMP167 – Quiz #06

Instructor: Michael Iannelli

Name: _____

Results: _____

Class: _____

Date: _____

1. Computers can generate truly random numbers

   a. True
   b. False

2. A simplified version of a program is called a simulation

   a. True
   b. False

3. What does the following expression evaluate to:
   `a and (b or c) == (a and b) or (a and c)`

4. Which expression is true approximately 66% of the time?

   a. random() >= 66
   b. random() < 0.66
   c. random() < .066
   d. random() >= 0.66

5. What is the difference between top down design and spiral design?

6. You are given a function called roll10d() which returns a random number between 0 and 9; however, does not return the numbers in a uniform distribution. Write a function to determine the approximate distribution of the numbers roll10d() returns

7. Write a program to estimate rolling 5 of a kind on a six sided die.

Extra Credit: In class, we discussed a method of unit testing that returns True of False depending on whether the function works or not:

```
test_method:
    if test_method(A) != <expected value> return  False
    if test_method(B) != <expected value> return  False
    …
    return True
```

Re-write the pseudocode to make the unit-test more informative.