**Sample questions for exam 1**

1. What does the expression 10 + 20 / 5 \* 4 – 1 evaluate to? 25

2. What does the expression 7.8 + 9 / 2 + 0.1 evaluate to? 12.4

3. What does the expression 7.8 + 9 // 2 + 0.1 evaluate to? 11.9

4. What does the expression 5 % 3 evaluate to? 2

5. What does the expression 3 \*\* 2 evaluate to? 9

6. What is printed as a result of the following statement?

for i in range(2,15,3):

print(i)

2, 5, 8, 11, 14.

7. Fill in the missing code on each of the lines provided.

# circle.py

# This program reads in the value of a radius of a circle from the user. It then

# computes the circumference and area of the circle, using the math library to

# do so. The results are then displayed to the screen.

\_\_\_\_\_import math\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ # Makes the math library available

print (“This program computes the circumference and area of a circle”)

print( )

\_\_\_\_radius\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = int(input(“Please enter the radius of the circle”))

circumference = 2 \* math.pi \* radius

area = \_\_\_\_\_math.pi\_\_\_\_\_\_\_\_\_\_\_ \* \_\_radius\*\*2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

print( “The circumference is”, \_\_\_circumference\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)

print (“The area is”, area)

8. Fill in the missing code on each of the lines provided.

#This program will read in 10 integers and compute their maximum.

#It will then display this value on the screen

for i in range( \_1, 11\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_):

value = int(input(“Please enter an integer “))

if i ==1:

maximum = value

elif value > maximum:

maximum = \_\_value\_\_\_\_\_\_\_\_\_\_\_\_\_\_

print (“The largest of the values you entered is: “, maximum)

9. Fill in the missing code on each of the lines provided

#This program will read in an unspecified number of integers from the keyboard

# and compute their average and display it on the screen. For each iteration, it will

#ask the user if there is more data to be entered. It should stop looping when the user

#responds with either of “n”, “N”.

total = 0

\_count = 0\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

answer = input(“Do you have a data value to enter? Press Y or N”)

while ( \_\_answer == “Y”\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_):

value = \_\_\_\_int\_\_\_\_\_\_\_\_\_(input(“What is your data value?”))

count = count + 1

total = \_\_\_\_total + value\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

answer = input(“Do you have a data value to enter? Press Y or N”)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

average = total/\_count\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

print (“The average of the values you entered is: “, average)

10. The following code is supposed to generate 10000 random integers, each in the range 1 through 100. It is supposed to count how many of these integers are in the range 1-25, how many are in the range 26-50, how many are in the range 51-75, and how many are in the range 76-100. The final values of these counters are to be output after all the random numbers have been generated.

Note that there are some things in this program which we haven’t covered in class, but were either in the reading or are very similar to things covered in class. There is a Python module called **random.** It works just like the **math** module that we have used. There is a function called **randint** in random that can be used to generate a random integer between the two numbers given as parameters. Also, Python does allow multiple assignment.

The code contains several errors, some of them syntax errors, and some of them logic errors. Find and correct them.

import random:

low, mediumLow, mediumHigh, high = 0,0,0,o

for i in range(1,10000):

x = randint(1,100)

if (x ≤ 25):

low = low + 1

elf (x < 51):

mediumLow = meduimLow + 1

elif (x < 76)

mediumhigh = mediumHigh + 1

else

High = high + 1

print (“There were”, low “values in the range 1 through 25.”)

print (“There were”, medium Low, “values in the range 26 through 50”.)

print( “There were, mediumHigh, “values in the range 51 through 75.”)

print( “There were”, High, “values in the range 76 through 100.”