GIS 540 Exam Types of Questions

1. True/False
2. Identify a Python element
3. Convert a Python FOR-loop to the equivalent WHILE-loop and vice versa.
4. Determine the printed output for a piece of code (or explain the error that it would give).
5. Determine the value of a variable, based on some sample code.
6. Write a FOR-loop to enumerate a set of GIS data of a certain type (the feature classes, rasters, tables, geodatabases, fields, etc…)
7. Write a branching script.
8. Read a Traceback error and identify the exception name, where and why it occurred.
9. Identify mistakes in pseudocode and/or Python code branching and/or repetition scripts.
10. Predict the flow in debugging ‘Step Over’ mode.
11. Convert non-batch scripts into a batch ones.

Example questions:

--Message board discussions and polls

--In-class exercises

--Homework

Exam 1 covers material from lessons 1-9, and homeworks 1-4

**Day 1**

Chapter 1

* Contrast the view of compound GIS datasets (e.g., ESRI GRID files, shapefiles) in ArcCatalog and Windows Explorer.
* Define the acronym IDE, give an example, and explain some advantages of using an IDE.

Chapter 2

* Identify fundamental components of Python code, such as keywords, built-in functions, constants, modules, and exceptions.  E.g., len, ZeroDivisionError, and None are  examples of  \_\_\_\_\_\_\_\_\_\_\_\_,  \_\_\_\_\_\_\_\_\_\_\_\_, and  \_\_\_\_\_\_\_\_\_\_\_\_, respectively.

**Day 2**

Chapter 3

* Employ order of operations (PEMDAS) E.g.,  5 + 2 \* 4
* Calculate integer division like Python 2.7 x =2, y = 3.0, z= 1   
  (x\*\*3)/(x\*y\*z) + x/4
* Employ string operations, methods
* Order numbers, strings
* Explain the difference between a string variable and a string literal.  Use an example.
* Explain the difference between an integer type variable and a float type variable. Use an example.

**Day 3**

Chapter 4

* Employ string operations, methods
* Explain the difference between and in-place function and a function that returns a value.Use an example.

**Day 4**

Chapters 5 & 6

**Day 5**

Chapter 7

Chapter 8

* Write branching and looping examples using correct pseudocode.

**Day 6**

Chapter 9

**Day 7**

Chapter 10

**Day 8**

Chapter 11

**Day 9**

Chapter 13