Key Concepts:

Warning: this list is not comprehensive!

- **Comments:** #
- **Data Types:** Integer, String, Float, Boolean, type()
- **Python Interactive Shell vs Python Script**
- **Basic Input and Output:** input(), print()
- **Debugging & Errors:** Syntax, Runtime, Indentation, Type, Name, Value
- **Syntax vs Semantics:** Logic Errors
- **Valid Identifiers & Reserved Words**
- **Parts of a Computer:** I/O Devices, Storage, Memory, Processor, Clock
- **Arithmetic Operators:** +, -, *, /, //, %, **
- **Compound Operators:** +=, -=, *=, /=
- **Equals Operators:** =, !=, ==
- **Order of Precedence:** ( ), **, -, * / // %, + -, > < ==, =
- **Escape Characters:** \\, \', \", \t, \n
- **Python Modules:** import, if __name__ == '__main__':

Discussion Questions:

1. What does type(“2839.0”) return?

2. What does the following print?

```
mystery = “multiple choice”
print(“mystery”)
```

3. If the following code is run and the user inputs 3897, then what does type(x) return?

```
x = input(“Input anything: ”)
```

4. Of the data types below, which combination cannot be added together?

Integer, Float, String, Boolean

5. Why does the following code not execute?

```
#print(and)
```

6. What is a good comment and why are they important?

7. What are the pros and cons of the Python Shell vs Python Script?

8. What is a problem that may arise from the line of code given below?

```
userInput = int(input(“Enter a number: ”))
```

9. Use the following lines of code to evaluate the expressions given below. Write "ERROR" if an error would be produced.

```
a = 2
b = 4
x = "candy"
y = 3.0
z = 1.5
```

A) `print(type(b / a))`

B) `print(x * y)`

C) `print(str(a) + str(b))`

D) `print(b ** a)`

E) `print("x")`

F) `print(int(z))`

G) `print(float(b) // a)`