Make sure you have the tutorial open when answering the following questions. All of the questions in this module use the Python Tutorial at:

·        <http://www.letslearnpython.com/learn/>

Note: You should use the black area of Repl to try the simple Python expressions listed in the questions below.

**Lesson 4: Strings – Strings  and Lesson 4: Strings – Examples**

1.   What is a string? Explain in words and provide an example.

When we use the word *string* in programming, we're talking about characters, like letters or symbols, or a bunch of characters put together, like words. "puppy dog"

'puppy dog'

"Hello!"

'Hello!'

2.   Explain why typing “apple” works and why typing apple without quotes gives an error.

Because the rule is if you type it with quotes then python can read it when you don’t it can’t read it because it needs quotes to understand it.

3.   Is there a difference between typing “apple” and ‘apple’. (i.e. is there a difference between using single or double quotes.

In Python, such sequence of characters is included inside single or double quotes. As far as language syntax is concerned, there is no difference in single or double quoted string. Both representations can be used interchangeably.

4.   Explain why typing “apple’ gives an error.

Because one side has two quotations and the other side has one so it does not work

5.   Explain why “2 + 5” does not equal 7 and how it is different from typing 2 + 5.

Because python reads “2+5” this as an expression and 2+5 doesn’t work because has no quotations

**Lesson 4: Strings – Operators**

1.       Type  “appl” + “e”  and explain what it does.  Why do you think this works?

Python can easily add things to strings

2.       Type “apple” - “e”  and explain what it does.  Why do you think this gives an error?

Python does not know how to subtract from strings

3.       Type  “Hello” \* 10   and explain what it does.  Why do you think this works?

This one can multiply to strings

4.       Type “Hello” / 10 and explain what it does.  Why do you think this gives an error?

It gives an error because division doesn’t work

5.       The ***concatenation*** operator (+) is very useful for working with strings. Explain ***concatenation*** with words and examples.

 Concatenation is a little bit like adding - we use it to put strings together side by side.

"Hi" + "there!"

'Hithere!'

**Lesson 4: Strings – Indexes  and Lesson 4: Strings – Indexes Examples**

1.   Create a string using the letters in your first name and write down the  ***index*** number for each letter.

print ("R" + "a" + "j" + " " + "s" + "h" + "a" + "h" )

 Raj shah

2.   Explain why print(“Hello!”[4]) does not print “l”.

Doesn’t count the first letter

3.   What does print(“Hay, Bob!”[4]) print? For a hint try print(“Hay, Bob!”[3]) and print(“Hay, Bob!”[5])

it prints “”

4.       Answer True or False: “String indexes in Python begin at 0”. Do you need to know the reason for this or do you just need to remember this?

 Answer is true

**Lesson 5: Variables**

1.   Complete “Lesson 5: Variables – Save a Value” by typing the sample commands in the black area of the IDE.

a.       What do you get if you type puppies / 3?

You cannot use divide

b.       Why doesn’t typing kittens / 3 work?

Does not work because you are dividing it

2.   Complete “Lesson 5: Variables – Math Operators” by typing the sample commands in the black area of the IDE.

a.       Explain what happens for following sequence of commands:

·   colour = “red” it reads it as a string

·   puppies = 36 reads it as an integer

·   colour + puppies you can’t add a string and integer together

3.   Complete “Lesson 5: Variables – String Operators” by typing the sample commands in the black area of the IDE.

a.       Explain why the following commands give different results:

·   Color + day \* fishes

·   ( Color + day ) \* fishes

Does not work because it can’t read variables and strings together

4.   Complete “Lesson 5: Variables – Indexes” by typing the sample commands in the black area of the IDE.

a.       What is the index of ‘r’ in “watermelon”?

4

b.       Write an expression using mynumber to return ‘r’

print(“mynumber[7])

5.   Integers (numbers) and Strings (letters) are different data types in Python?

a.       What doesn’t “friend” + 5 work?

It doesn’t work because gives a syntax error

b.       What is the difference between the ***int*** and ***str*** data types?

“A word that you put in quotes is just a string of letters called a "str" in python. Numbers that don't have a decimal point are integers and are called "int" in python. You can't add a str and an int. But you can turn a number into a string if you use the str() function.”