1. In the below elements which of them are values or an expression? eg:- values can be integer or string and expressions will be mathematical operators.

\*

'hello'

-87.8

-

/

+

6

**Ans: \* :------ expression**

**'hello' :----------- value**

**-87.8 :---------- float value**

* **:---------- expression**

**/ :---------- expression**

**+ :---------- expression**

**6 :---------- value**

1. What is the difference between string and variable?

**Ans: A variable work as a container to store the data that are being given by the user on the other hand a string can be considered a type of a data that is being stored by the user inside a variable. For example : a = ‘hello’. Here the variable is “a” and the “ ‘hello’ “ is a string.**

1. Describe three different data types.

**Ans: Three different types of data types in python are:**

**\* Numbers ---- Numbers refer to the data types which are in the form of integer (int),**

**Float (float are the decimal based numbers such as 87.9), and complex(here you can define a complex number such as 8 + 3j here j is the symbol for writing or defining a complex number)**

**\* String ----- string is a type of data type available on python inside a string datatype you can assign a word or text that are provided by a user e.g : a = ‘hello’. Here the variable is “a” and the “ ‘hello’ “ is a string.**

**List ----** A list contains items separated by commas and enclosed within square brackets ([]).

**For e.g---- list[123,’hello’,5,6,7,8,9,]**

1. What is an expression made up of? What do all expressions do?

**Ans : Expression Is generally a combination of operator , contants and variable. For example : r=a+b+c.**

**Here r=a+b+c is entirely an expression where a,b,c are operands , + is the operator and r is the variable.**

**All expressions are provided by a user is order to evaluate a new value depending on their use.**

1. This assignment statements, like spam = 10. What is the difference between an expression and a statement?

**Ans : Statements represent an action or command just like the given statement “spam=10” ,here the variable spam is stated a value of 10 by the user or another example such as print”hello I am new to python” . whereas Expression Is generally a combination of operator , contants and variable. For example : r=a+b+c.**

1. After running the following code, what does the variable bacon contain? bacon = 22

bacon + 1

**Ans : after running it into my jupyter notebook I got the output as :**

**Bacon=22**

**Bacon + 1 (shift + enter)**

23

1. What should the values of the following two terms be? 'spam' + 'spamspam'

'spam' \* 3

**Ans : after running it into my jupyter notebook I got the output as :**

**‘spamspam’**

**‘spam’\*3 (shift+enter)**

'spamspamspam'

1. Why is eggs a valid variable name while 100 is invalid?

**Ans**: **A Identifier cannot be specified using a number  because the compiler gets confused whether it is a variable or a number. Same in the case of “eggs “ it is in a alphabetical order so the python compiler consider it as a valid variable name rather than 100 but it will be considered as correct variable name if the name is in the form “eggs100” or “eggs\_100”that is combined without any space .**

1. What three functions can be used to get the integer, floating-point number, or string version of a value?

**Ans: int() to get the integer**

**Float() to get the decimal numbers or floating point numbers**

**Str() to get a string function**

1. Why does this expression cause an error? How can you fix it? 'I have eaten ' + 99 + ' burritos.'

**Ans: I will simply make the 99 as ‘99’**

**(that is I will convert it into a character)**

'I have eaten ' +’ 99’ + ' burritos.' (shift+enter)

'I have eaten 99 burritos.'