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.

\* -**>Expression**

'hello' **->Value**

-87.8 **->Value**

- **->Expression**

/ **->Expression**

* **->Expression**

6 **-> Value**

2. What is the difference between string and variable?

Answer: **Variables in programs are references to values that have types. *String* is simply one of the handful of types that Python uses along with various number types, collection types (list, string , tuple, dictionary, and set), objects and a few more.**

**A variable is called that because the value it references can vary (in contrast to a constant like in some languages).**

3. Describe three different data types.

Answer:

**1) Int – It stores the integers values that can be positive or negative and do not contain any decimal point.**

**2) Float – These are floating-point real numbers that stores the decimal values. It consists of integer and fraction parts.**

**3) Complex – These are complex numbers specified as a real part and an imaginary part.**

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

Answer:

**An expression is a construct made up of variables, operators, and method invocations, which are constructed according to the syntax of the language, that evaluates to a single value.**

**The interpreter evaluates the expression and displays the result.**

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

Answer: **Expression is made up of values, containers, and mathematical operators (operands) and the statement is just like a command that a python interpreter executes like print.**

6. After running the following code, what does the variable bacon contain?

bacon = 22

bacon + 1

Answer: **bacon will contain 23**

7. What should the values of the following two terms be?

'spam' + 'spamspam' = **spamspamspam**

'spam' \* 3 = **spamspamspam**

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

Answer: **Variable names cannot begin with a number.**

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

Answer: **The int(), float(), and str() functions will evaluate to the integer, floating-point number, and string versions of the value passed to them.**

10. Why does this expression cause an error? How can you fix it?

'I have eaten ' + 99 + ' burritos.'

Answer:

**The expression causes an error because 99 is an integer, and only strings can be concatenated to other strings with the + operator. The correct way is I have eaten ' + str(99) + ' burritos.'.**