Q1. 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- String is a data type representing a sequence of characters in double or single quotation marks where as Variable is a kind of container where the data values can be stored.

3. Describe three different data types.

Answer- In python, there are different built-in data types:

* NUMERIC DATA TYPES – int(represents whole number) , float(represents numbers with fractional parts) , complex(represents complex number as real and imaginary part)
* TEXT DATA TYPE- str(represents sequence of characters)
* BOOLEAN DATA TYPE – bool(represents logical true and false)

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

Answer- An expression is made up of operands and operators. It evaluates to provide the single value as an output.

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

Answer- A statement executes the given command whereas an expression evaluates the operation and provide a single value.

Example: spam = 10 🡪 Statement

spam = spam + 10 🡪 Expression where + is an operator

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

bacon = 22

bacon + 1

Answer- Variable bacon contains the value 22 after executing the given code.

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- As per the rules for python variables, a variable name must start with a letter or the underscore character. A variable name cannot start with a number. That’s why eggs is a valid variable name and 100 is invalid.

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

Answer- integer 🡪 int( )

floating-point number 🡪 float( )

string 🡪 str( )

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

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

Answer- This expression will cause error because it can only concatenate string data type to string data type and here it is trying to concatenate string to an integer data type.

It can be fixed if it is written as:

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