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

**Answer:- \*, -, /, + are the mathematical operators and ‘hello’ , 6 and -87.8 are the values. Or we can say that 6 and -87.8 falls under the category of constant expressions .**

2. What is the difference between string and variable?

**Answer:- String is a data type which basically means it is a type of information and variable is a storage to that information.**

3. Describe three different data types.

**Answer:- 1. Sequence type:- strings, lists and tuple are the data types in python which fall in the sequence category data types. Strings are always inclosed within single or double braces. Lists are always inclosed within square brackets and touples are always inclosed within round brackets or parenthesis.**

**2. Numeric data types: In numeric data types there are three in-build data types are available in python those are integer, float, complex numbers. Integer is for integer numbers means it is for whole numbers. Float is for the continuous numbers means fractions and complex number is for calculation of complex number.**

**3. Boolean : this is also a in-build data type available in python. In this data type there are only two outputs those are either true or false.**

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

**Answer:- Expressions are made up of two things. Those are operators and some values on which the operators are applied for example: in arithmetic expressions we can have some values like some numbers and operators like +,-,\*,/,//,%,\*\* with their functionalities addition, subtraction , multiplication, division, quotient, reminder and exponentiation respectively. In expressions we achieve these functionalities. There are various types of expressions like arithmetic. Those are integral expressions, floating expressions, relational expressions, etc.**

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

**Answer:- expressions are combinations of variables , values and operations that gives a result value but statements represent an action or a command like showed in question or we do in print statements.**

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

bacon = 22

bacon + 1

**Answer:- 23**

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

'spam' + 'spamspam'

'spam' \* 3

**Answer:- for both the answer will be 'spamspamspam'**

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

**Answer:- because 100 is a integer value and python does not allow integer values to be a variable name. on the other side eggs does not exceed the rules of making the variable name that’s why it is allowed.**

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

**Answer:- int(), float(), str().**

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

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

**Answer:- this expression is causing an error because concatenation of string type and integer type is not allowed in python .**

**We can convert that 99 in string by writing it under single braces to fix the error.**