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.

\* **expressions**

'hello' **values**

-87.8 **values**

- **expressions**

/ **expressions**

* **expressions**

6 **values**

2. What is the difference between string and variable?

**Ans:**

**A variable is memory location. You can assign any data type. String is data type you can assign to any variable.**

3. Describe three different data types.

**In python we have following data type**:

**Numeric: Numeric data type have numeric values. Examples are Integers, Float, Complex.**

**Sequence Type: Sequence is ordered collection of same or different datatypes. Example are List, String, tuples.**

**Boolean: This data type has only two built in values True, False.**

**Set: Set is unordered collection of data type that is iterable, mutable and has no duplicate values.**

**Dictionary: Dictionary is unordered collection of data type having key value pair**.

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

**Ans:**

**Expression is made up of value, variable, operators, function calls. All expression evaluates some values.**

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

**Ans:**

**Expression evaluates some values while statement represent actions or command.**

**Example x+2 is expression while x=3 is statement**.

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

bacon = 22

bacon + 1

**Ans:**

**22**

**because on second statement we are not assigning increment by one to bacon variable.**

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

**Ans:**

**'spam' + 'spamspam' output : 'spamspamspam'**

**'spam' \* 3 output : 'spamspamspam'**

**Both will provide same value.**

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

**Ans:**

**Variable name can be any length and contains uppercase, lowercase letters, digits, underscore except one condition is that first character of variable can not be digit, so 100 is not valid variable name.**

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

**Ans:**

**Three functions are as follows**

**Int(),float(),str().**

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

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

**Ans:**

It gives error because we can use + operator only with same data type.in above we are using mixed datatype string and integer. We can fix by using **type conversion functions** .we use str() function to convert integer in to string.

'I have eaten ' + **str (99)** + ' burritos.'