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.

\* = multiplication operator

'hello' = string value

-87.8 = float value

- = subtraction operation

/ = division operation

* = addition operation

6 = integer

2. What is the difference between string and variable?

3. Describe three different data types.

**Ans**.**3** The three different data type in pyton are the following-:

1. **Integer**- Its represents the whole number system without decimals values,for eg. 5, 9, 500 etc.
2. **Floating**- Its represents number with decimals value or fraction parts such as 6.9, 44.9 etc.
3. **String**- its represents a sequence of characters, such as “ hello ineuron” or “ love to learn with ineuron.”

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

**Ans**.**4** An expression is made up of values, variables and operators. It can be a combination of mathematical or variables , logical operators , values that produce a new value when evaluated.

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

**Ans.5 Expression**

**.** It is a piece of code that produce a value when evaluated. It can be as simple as a single value or involve multiple components such as operators, variables ,and fuction calls.

**Statement**

**.** Statements are executed sequentially and can include expressions within them.

In the example:-

Spam = 10 , it is a **statement** that is assigns the **value 10** to the **variable spam**.

And

10, is an **expression** that evaluates to a value, and the statement assigns that value to the variable.

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

bacon = 22 (**bacon will still contain the value 22).**

bacon + 1 ( **the value of bacon+1 would become 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?

**Ans.8** In python there is a set of rules which don’t allow variables names to start with a digit. It must begin with a letter or an underscore.this is why eggs is a valid name,while 100 is not.

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

**Ans.9** The 3 functions are the following

1. **INT () FUNCTION**

value = 10.5

integer\_value = int(value)

.In this int() function convert the floating-point number 10.5 to integer 10.

1. **FLOAT () FUNCTION**

value = "3.14"

float\_value = float(value)

.In this case float () function convert the string “3.14” to float 3.14 .

1. **STRING () FUNCTION**

value = 42

string\_value = str(value)

.In this an integer 42 is converted into string “42”.

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

‘ I have eaten ’ +99 + ‘ burritos’ .

Ans.10 Error is causing because we have added integer in between string directly without properly converting it. To solve the error we have to convert 99 into “99” or str(99).

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