**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

Ans No.1:

* **\*: -** Expression
* **‘hello’: -** Value
* **-87.8: -** Value
* **-: -** Expression
* **/: -** Expression
* **+: -** Expression
* **6: -** Value

**2. What is the difference between string and variable?**

Ans No.2:

String: It consists of characters or series of characters enclosed between quotation marks either double (“ ”) or single (‘ ’).

E.g., ‘data’.

Variable: Space in memory to store value. Variable’s value changes through out program that is why it is called variable.

E.g., x = 10

**3. Describe three different data types.**

Ans No.3:

1. Int: It consists of whole numbers be it positive or negative.
2. Bool: It consists of two values ‘True (1)’ or ‘False (0)’.
3. Float: It consists of real numbers with a decimal point.

E.g.,

10 – int

10.5 – float

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

Ans No.4:

An expression consists of a combination of values, mathematical operators and variables performed on data in order to yield a value.

Expressions in python are used for calculations, decision-making and other manipulative tasks.

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

Ans No.5:

**Expressions** are used to return a valuable result when evaluated. On other hand, **statements** are used to control the flow of program or perform an action.

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

bacon = 22

bacon + 1

Ans No.6:

bacon = 22 (As bacon is not reassigned in the 2nd step)

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

'spam' + 'spamspam'

'spam' \* 3

Ans No.7:

spamspamspam

spamspamspam

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

Ans No.8:

100 is invalid as variable name because variables cannot contain digits.

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

Ans No.9:

1. int(value)
2. str(value)
3. float(value)

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

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

Ans No.10:

We cannot concatenate an integer with a string. We can fix it by type-casting 99 from int as str.

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