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: VALUES are “hello”, -87.8, 6**

**EXPRESSIONS ARE +, -, \*, /**

2. What is the difference between string and variable?

* **String** is a sequence of characters enclosed within single or double quotes.

Eg: “hello” is a string

* **Variable** is an element which is used to store the value.

Eg: a=10, Here a is a variable because it stores the value.

3. Describe three different data types.

* **Numeric data type:** int, float
* **Text data type:** str
* **Sequence data type:** list, tuple

**Int** is used to represent the whole numbers.

**Str** is used to represent the string value.

**List** is an ordered collection of heterogeneous elements.

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

**ANS:** An expression is made up of an **Operator** and an **Operands**. Expressions are used to perform Computaions and generate a new values.

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

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| |  |  | | --- | --- | | **Statement in Python** | **Expression in Python** | | A statement in Python is used for creating variables or for displaying values. | The expression in Python produces some value or result after being interpreted by the Python interpreter. | | A statement in Python is not evaluated for some results. | An expression in Python is evaluated for some results | | The execution of a statement changes the state of the variable. | The expression evaluation does not result in any | | A statement can be an expression. | A statement can be an expression | |  |
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6. After running the following code, what does the variable bacon contain?

bacon = 22

bacon + 1

**ANS: After running the code, bacon =23**

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

'spam' + 'spamspam'

'spam' \* 3

**ANS:** 'spam' + 'spamspam'= **‘spamspamspam’**

'spam' \* 3 = **‘spamspamspam’**

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

**ANS: Variable name must starts with a letter or underscore. So, eggs is a valid variable name.**

* **Variable name cannot starts with a number. So, 100 is invalid variable name.**

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

**ANS:**

* **Int() – to get the integer number**
* **Float() – to get the floating-point number**
* **Str() – to get the string value.**

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

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

**ANS:** Above expression is causing error because we **cannot** **concatenate** string datatype with int datatype . To fix that, we want to convert 99 to string data type.

**Output: ‘I have eaten’ + ‘ 99’ + ‘ burritos.’ = ’I have eaten 99 burritos.’**