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:** ‘hello’, -87.8, 6

**Expression:** “ \*, -, /, +, “

2. What is the difference between string and variable?

**Ans:** Any data which is written inside the quotes are called string, which are immutable.

A Variable is basically the name of the location in the primary memory of the computer. A variable can store everything from strings to numbers.

3. Describe three different data types.

**Ans:**

1. **INTEGER:** This value is represented by the int class. It contains positive or negative whole numbers without fraction or decimal.
2. **STRING:** It is represented by str class. A String is a collection of one or more characters put in a single quote, double-quote or triple quote. A character is a string of length one.
3. **LIST:** Lists are just like the arrays, which are the data structures consisting of collection of data in which each element of the data can be accessed by its index number.

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

**Ans:** An expression is made up of combination of values, variables, operators, and calls to functions that are combined and interpreted by the compiler to create a new value and an expression is an instruction which evaluates values and operators down to the single line.

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

**Ans:** An assignment statement sets and resets the value stored in the storage location denoted by a variable name; in other words, it copies a value into the variable.

An expression always evaluates to a value. And, A statement does something, like creating a variable or displaying a value, it only does whatever the statement says. Eg: Print statement, Assignment statement.

|  |
| --- |
|  |
| 10 |

|  |
| --- |
| **SPAM** |

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

bacon = 22

bacon + 1

**Ans:**  **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:** As the variable name cannot be a numerical value, 100 is invalid. As the name “eggs” is alphabetical character it can be a variable name.

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

**Ans:** The **int(), float(), and str()** functions will evaluate to the integer, floating-point number, and string versions of the value passed to them.

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

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

**Ans:** The given expression cause an error because **99** is **not defined.** To fix the expression 99 should be defined **(‘99’).**

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