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.**

**Ans:**

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

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

**Ans:** String: It’s a sequence of characters means it contains a ‘string’ of letters or numbers and they are immutable. Always surrounded by either single or double quotation marks.

E.g., ‘hello’

Variables: They are the containers for storing data values. It may contain string, integers, float, Booleans and other data types.

E.g., x = 2, y= ‘hello’

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

**Ans:** Text Type: str – “hello”

Numeric Type: int – 67 , float – 45.6, complex – 5+6j

Boolean Type: bool – True & False

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

**Ans:** An expression is a combination of values, variables, operators and calls to function.

Expression evaluates to a value. E.g., x + 9

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

**Ans:** Expression evaluates to a value. It’s a combination of variables, operations and values that yields a result value. E.g., X + Y

Statement dose something. It’s represented an action or command. E.g., print statement

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

**bacon = 22**

**bacon + 1**

**Ans:** 22. The bacon variable is set to 22. And bacon + 1 expression dose not reassign the value in bacon.

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

**'spam' + 'spamspam'**

**'spam' \* 3**

‘spamspamspam’

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

**Ans:** Variable names cannot begin with a number.

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

**Ans:** int() for integer, float() for floating-point number and str() for string.

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

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

**Ans:** The expression causes an error because 99 is an integer and only stings can be concatenated to other string. The correct expression would be ‘l have eaten’+ str(99)+’burritos’.