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.

|  |  |
| --- | --- |
| \* | **expression (mathematical operator)** |
| 'hello' | **String(value)** |
| -87.8 | **Float(value)** |
| - | **Mathematical operator(expression)** |
| / | **Mathematical operator(expression)** |
|  | **Mathematical operator(expression)** |
| 6 | **Integer(value)** |
|  |  |

2. What is the difference between string and variable?

**ANS:- it is a data type that stored a sequence of characters and it is enclosed between “ “ or ‘ ‘ and it can store any integer, numeric, or texted value.**

**The variable is a function in which we assign any value (numeric or integer)**

**e.g.:- a=5 here a is the variable that holds the value 5.**

3. Describe three different data types.

**Ans:**

1. **Boolean**
2. **Integer**
3. **string**

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

**Ans: expressions are a combination of values, operators, and functions that produce a result**

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

**Ans: Expressions are the code that contains value whereas statements are the code which are responsible for the execution.**

**Statements do not produce a value directly they will contain loops or class objects**

**Expressions are used for the calculations and assigning the values.**

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

bacon = 22

bacon + 1

**Ans: bacon contains the value of 23**

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

'spam' + 'spamspam'

'spam' \* 3

**Ans: in both the cases the answer will be same spamspamspam**

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

**Ans: variable cannot start with a numeric value i.e. eggs variable name is invalid but 100 is invalid.**

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

**Ans:**

1. **int() to get the integer value.**
2. **float() to get the floating point number**
3. **str() to get the string version of a value.**

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

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

**Ans: the above expression is causing an error as we are adding two string with integer which is not possible**

**Corrected code:**

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

**Or**

'I have eaten ' + ‘99’ + ' burritos.'