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.

\* is expression

'hello' is a string value

-87.8 is floating no.

- is expression

/ is expression

* is expression

6 is a value

2. What is the difference between string and variable?

|  |  |
| --- | --- |
| String | Variable |
| It’s a value representing text | It’s a name refer to any value |
| Single or double quotes used to create string |  |

3. Describe three different data types.

* Numeric data types: int, float, complex.
* String data types: str.
* Sequence types: list, tuple, range.
* Binary types: bytes, bytearray, memoryview.
* Mapping data type: dict.
* Boolean type: bool.
* Set data types: set, frozenset. Python Numeric Data Type.

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

An **expression** is a combination of values, variables, operators, and calls to functions. Expressions need to be evaluated. Expression are made up of operators , operand

Python expressions only contain identifiers, literals, and operators.

**Identifiers**: Any name that is used to define a class, function, variable module, or object is an identifier. **Literals**: These are language-independent terms in Python and should exist independently in any programming language. In Python, there are the string literals, byte literals, integer literals, floating point literals, and imaginary literals. **Operators**: In Python you can implement the following operations using the corresponding tokens.

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

The whole of the code above is a statement because it carries out the task of assigning 10 to spam. A line of code is a statement because most compilers or interpreters don't execute any standalone expression.

We write expression in right side

Expressions can be assigned or used as operands, while statements can only be declared.

Statements create side effects to be useful, while expressions are values or execute to values.

Expressions are unique in meaning, while statements are two-sided in execution. For example, 1 has a certain value while go( ) may be executed or not.

Statements are the whole structure, while expressions are the building blocks. For example, a line or a block of code is a statement.

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

bacon = 22

bacon + 1

22

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?

Eggs is valid because its starts with character

100 is start with no.

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

Int() for interger , float() for floating point no. str() for string

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

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

The expression causes an error because 99 is an interger and only strings can be concatenated with other string using + operator

Correct way is 'I have eaten ' + str(99) + ' burritos.'