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.

Values - 'hello' , -87.8, 6

Expressions - \*, - ,/,+

2. What is the difference between string and variable?

|  |  |
| --- | --- |
| String | Variable |
| A 'string' is simply a list of characters in order. | A variable is something that holds a value that may change. In simplest terms, a variable is just a box that you can put stuff in |
| Print(“ I am a boy”)  >>I am a boy  In this “I am a boy” is a string. | a=1  Print(a)  >>1  In this “a ” is a variable |

3. Describe three different data types.

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| --- | --- | --- |
| Data Type | Definition | Examples |
| Integer (int) | Numeric data type for numbers without fractions | -707, 0, 707 |
| Floating Point (float) | Numeric data type for numbers with fractions | 707.07, 0.7, 707.00 |
| Character (char) | Single letter, digit, punctuation mark, symbol, or blank space | a, 1, ! |

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

A combination of operands and operators is called an expression. The expression in Python produces some value or result after being interpreted by the Python interpreter. An expression in Python is a combination of operators and operands. An example of expression can be : x = x + 1 0 x = x + 10 x=x+10.

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

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

>>>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?

Variable names cannot begin with a number. Hence, eggs is valid and 100 is not

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

In Python, the following three functions can be used to get the integer, floating-point number, or string version of a value:

int() to get the integer version of a value

float() to get the floating-point number version of a value

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.'

This expression causes an error in Python because you cannot concatenate a string and an integer using the + operator. The + operator performs addition for numeric data types and concatenation for string data types.

To fix the error, you need to convert the integer value 99 to a string using the str() function, like this:

Code can be >> 'I have eaten ' + str(99) + ' burritos.'