**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

**'hello'** VALUE

-**87**.**8** VALUE

**-** EXPRESSION

**/** EXPRESSION

* EXPRESSION

**6** VALUE

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

Variable is a reserved memory location to store values. Every value in python has a datatype. String is one of the datatype in python to store sequence of characters.

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

Str – String data type is used to store a sequence of characters. Examples of strings include: “abhilash” or “123.423” or “{“key”:”value”}”

Int – int datatype is used to store integers in python. Examples of integers include: -1, 0, 100

Bool – bool datatype is used to store Boolean types in python, bool types in Python are represented as True and False.

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

An expression is made up of operators and operands, expressions are interpreted to produce some other value. Example expression: *a + b*

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

A statement performs some action, this in case it is assigning the variable ‘spam’ with value 10. An expression evaluates to some value.

An expression can be part of a statement, but a statement is never a part of an expression. Statements typically don’t have a type but all expressions have types. Example expressions: “Hello”, 5+7

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

**bacon = 22**

**bacon + 1**

bacon will contain 22, because the last line is a expression but not a statement, hence the value of bacon is unchanged.

**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?**

In Python the variable names should start with a-z or A-Z or underscore(\_). No other special characters are allowed other than underscore. Also variable names can have numbers but not at the beginning. Hence 100 is invalid variable name.

Also any variable name in Python should not be a Python Keyword (reserved words)

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

This can be done by explicit type casting, assuming the variable name is **abc**, the three functions will be *int(abc), float(10), str(10)*

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

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

You cannot add integers to strings, here first and last operands are strings. Corrected expression will be: 'I have eaten ' + ‘99’ + ' burritos.'