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: \*, -, /, + are the expressions

\*

'hello'

-87.8

-

/

6

2. What is the difference between string and variable?

Strings are amongst the most popular types in Python. We can create them simply by enclosing characters in quotes. Python treats single quotes the same as double quotes. Creating strings is as simple as assigning a value to a variable

var1 = 'Hello World!'

A variable is only a name given to a memory location, all the operations done on the variable effects that memory location.

Eg name=’John’. Here name is the variable

3. Describe three different data types.

There are 5 different datatypes in python.

1. Numeric data type : Data type is used to hold numeric values(int,long,float,complex)

Eg: a=100

1. String data type : The string is a sequence of characters. Strings are represented either by single or double value.

a = "This is a String"

1. List data type : The list is a versatile data type exclusive in Python. it can simultaneously hold different types of data

c= ["hey","you",1,2,3,"go"]

1. 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 functions. Expressions need to be evaluated.

The evaluation of an expression produces a value, which is why expressions can appear on the right hand side of assignment statements. A value all by itself is a simple expression, and so is a variable. Evaluating a variable gives the value that the variable refers to.

Print(1+1) – print will evaluate the expression and display the value

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

[Expressions](http://docs.python.org/reference/expressions.html) only contain [identifiers](http://docs.python.org/release/2.5.2/ref/identifiers.html), [literals](http://docs.python.org/release/2.5.2/ref/literals.html) and [operators](http://docs.python.org/release/2.5.2/ref/operators.html), where operators include arithmetic and boolean operators, the function [call operator](https://docs.python.org/3/reference/expressions.html?highlight=subscriptions#calls) () the [subscription operator](https://docs.python.org/3/reference/expressions.html?highlight=subscriptions#grammar-token-subscription) [] and similar, and can be reduced to some kind of "value", which can be any Python object.

Examples: 3 + 5

map(lambda x: x\*x, range(10)

Statements , on the other hand, are everything that can make up a line (or several lines) of Python code. Note that expressions are statements as well.

Examples: print 42

if x: do\_y()

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

bacon = 22

bacon + 1

Ans:22

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

'spam' + 'spamspam'

'spam' \* 3

Ans: ‘0spamspamspam'

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

Ans: variable name cannot start with integer. Variable name can start with letter or underscore.

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

Ans: int() , float(), str()

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

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

Strings should be surrounded by single or double character. Below is the correct fix

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