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.

\* - It is an expression

'hello' - value, it’s a string

-87.8 - value ,it’s float

- -“ It is an expression”

/ -It is an expression

* -It is an expression

6 -it’s a value

2. What is the difference between string and variable?

ans- A **variable** is something that can hold a value.

A **string** is one of many *types* of values. A string is a type of information you would store in a Variable. A String is usually words, enclosed with " " .Strings represent texts.

A variable is a “place” where you can store any of these types of values, but is not in itself a value.

3. Describe three different data types.

ans-

**1**.**Integers** – This value is represented by int class. It contains positive or negative whole numbers (without fraction or decimal).

**2.Float** – This value is represented by float class. It is specified by a decimal point.example- 22.678,876.67 etc

**3.Complex Numbers** – Complex number is represented by complex class. It is specified as *(real part) + (imaginary part)j*. For example – 2+3j

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

Ans-An expression is a combination of operators and operands that is interpreted to produce some other value.

| Example:  1.x = 15 + 1.3  2.a = 21  b = 13  c = 40  d = 37  p = (a + b) >= (c - d)  print(p) |
| --- |

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

Ans-Expressions only contain identifires,literals andoperators, where operators include arithmetic and boolean operators, the function call operators () and similar, and can be reduced to some kind of "value".Expressions always give some value as output.

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.

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

bacon = 22

bacon + 1

Ans- Output will be 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?

Ans- There are few rules for defining variables in python.Which are as follows:

1. Variable name should start with letter(a-zA-Z) or underscore (\_).

2.In variable name, no special characters allowed other than underscore (\_).

3.Variable name can have numbers but not at the beginning.

4.Variables are case sensitive.

5.Variable name should not be a Python keyword.Keywords are also called as reserved words.

eggs is a valid variable name because it is starting with an alphabet which is allowed in python while 100 is not a valid variable name because variable name can have numbers but not at the beginning.

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

Ans-1.Function used to get the integer is int().

2..Function used to get the floating-point number float().

3..Function used to get the string is str().

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

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

Ans- Here we are trying to perform concatination but it’s possible only for same datatype.

correction- ‘I have eaten ' + ‘99’ + ' burritos.' here we need to convert 99 inttype to string datatype.