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.

\*

'hello'

-87.8

-

/

6

**Ans:**

1. **\* , - , / , + are Expression**
2. **'hello',-87.8,6 are Values**

2. What is the difference between string and variable?

**String is one of the datatypes in python whereas variable is like container which stores value of the data type.**

**E.g.:**

**carName = “BMW”**

**here carName is variable which stores the string “BMW”**

3. Describe three different data types.

**Integer:this datatype is used to store integer values .the number can be positive , negative or zero but number should not contain fraction part.**

**Eg:1,-2,22,0 are valid int values**

**1.2,2.11 are invalid int value**

**Float:this datatype used to store positive and negative real number with fractional part.**

**Eg:2.0,1.0,0.3 are valid float values**

**Boolean:this datatype is used to store true or false .this datatype mainly used to valid any condition in program.**

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. In any programming language, an expression is evaluated as per the precedence of its operators.**

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

**Ans**

**Expression is evaluated into single value but statement does not**

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

bacon = 22

bacon + 1

**Ans :bacon value is still 22 because new bacon value is are reassign to it .for that we can use bacon++ or bacon =bacon+1**

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

'spam' + 'spamspam'

'spam' \* 3

**Ans:**

**1)'spamspamspam'**

**2) 'spamspamspam'**

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

**Ans**

**Because every programming language have set of rules to follow for variable naming**

**In python for declaring variable, we will fallow**

**1)Variable name must start with letter or the underscore character**

**2)variable name cannot start with a number**

**3)variable name contain only(A-Z, a-z,0-9,\_)**

**4)variable names are case sensitive**

**Since 100 is starting with number it’s invalid whereas eggs stating with letter so it’s valid**

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

**ANS**

**We use int() function to get integer version value eg.int(44)**

**We use float() function to get floating-point version value eg.float(44.5)**

**We use str() function to get stringversion value eg.str(44)**

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

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

**Ans: ‘+’ operator acts like concatenation only between string datatypes .but in given expression contain int(99) data type .so it throughs Typeerror**

**To work this expression we can use this expression** 'I have eaten ' + ‘99‘+ ' burritos.'