**PYTHON MODULE- Assignment-1**

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

**Solution:**

* **Values are** 
  + **‘hello’**
  + **-87.8**
* **Expressions are**
  + **\***
  + **–**
  + **/**

2. What is the difference between string and variable?

**Solutions:**

**String is one of data type used to represent text data. Any value assigned to a variable with a single or double quote is considered as string.**

**Example: name= ’Rani’ where ‘Rani’ is string**

**Variable is used to store value in memory location. It is a temporary storage location. Variable is an alphabet or a group of alphabets.**

**Example str x= ‘Devi’ where x is variable**

3. Describe three different data types.

**Solution:**

1. **Numeric Data types:**

**Numeric data types are used to represent numeric values. It can be integer, float or complex numbers.**

**Ex: Integer data type int a=3**

**Float data type float b=2.3**

**Complex data type complex c=3+2j**

1. **String Data type:**

**String is used to represent text data. Any value assigned to a variable with a single or double quote is considered as string**

**Ex: string data type str city= ‘Chennai’**

1. **Boolean Data type:**

**Boolean data type represents one of two values such as true or false**

**Ex: a= 2<1 print(a)**

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

**Solution:**

**Expression is a combination of variables, constants and mathematical operators that always produces a result value. Expressions evaluates by itself and assign/return the result value to the variable**

**Ex: a=2+4**

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

**Solution:**

* **The expression always produces/returns the result value where as the statement may or may not produce the result value**
* **Expressions evaluates by itself where as the statement do whatever it says**
* **Eample of expression is c=a+b+16**

**Example of statement is if(a<b)**

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

bacon = 22

bacon + 1

**Solution: 23**

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

'spam' + 'spamspam'

'spam' \* 3

**Solution:**

**For both the terms, the value is**

**‘spamspamspam’**

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

**Solution:**

**100 is invalid variable name because variable name should start with the number or underscore character. It cannot start with number.**

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

**Solution:**

* **int() function is used to get integer version of value. Ex. int(5.3)=5**
* **float() function is used to get floating-point numer version of value. Ex. float(5)=5.0**
* **str() function is used to get string version of a value. Ex. str(3.6)= ‘3.6’**

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

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

**Solution:**

**The above expression gave an error because different data types (string and integer) cannot be added together.**