**Python Assignment 1**

**1. In the below elements which of them are values or an expression? E.g., values can be integer or string and expressions will be mathematical operators.**

**\* :** Expression

**'hello' :** Values (String)

**-87.8 :** Values (Floating no)

**- :** Expression

**/ :** Expression

* **:** Expression

**6 :** Values (Integer)

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

**Ans:** Strings are sequence of characters. It can hold zero or more than zero characters in it. ‘’, “ ” can be used around the characters whereas variable is a name that refers to value. The major purpose of variable is to store a value from one part of integer so that it can be used in other part of program.

e.g., Message = “This is string”

A string type variable named message is created a value is stored in it.

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

**Ans:** The three different data types are:

1. Strings: They are sequence of characters.
2. Integers: It can be (+) ve or (-) ve without decimal values
3. Floats: Numbers with decimal points on it

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

**Ans:** Expression is a combination of values, variables & operators.

Example: (i) 1+1 (ii) 4\*3+3

The expression in Python produces some result or value after being interpreted.

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

**Ans:** Expression is a combination of values, variables & operators.

Example: (i) 1+1 (ii) 4\*3+3

A statement is a unit of code that python interpreter executes. It can be a single statement or group of statement like statement within loops, functions etc.

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

**bacon = 22**

**bacon + 1**

**Ans:** Bacon = 23

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

**'spam' + 'spamspam'**

**'spam' \* 3**

**Ans:** 'spamspamspam'

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

**Ans:** As per the rules while the naming the variables

1. Letters, numbers, and underscore are allowed.
2. It cannot start with numbers.

Thus, Eggs are a valid variable name while 100 is invalid.

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

**Ans:** The three functions can be used to get the following are as follows:

1. Integers: int()
2. Floating-point number: float()
3. String: str()

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

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

**Ans:**  This expression causes error because we cannot concatenate string to integer so to fix this error you need to convert 99 to string by type casting i.e.,

‘I have eaten’ + str(99) + ‘burritos.’