Assignment-1

***Question-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*

***Answer-1***:Value can be any numeric number,a string etc.Therefore,-87.8 , ’hello ’ and 6 are the values here.An expression is defined as a combination of constants,variables and operators.An expression always evaluates to a value.A value or a standalone variable can also be considered as an expression but a standalone operator is not an expression.Hence,-87.8 and 6 are also expressions.

***Question-2***:*What is the difference between string and variable?*

***Answer-2***:A string is a sequence of characters enclosed in double or single quotes while a variable is considered as a container to hold a data object.It refers to an object.A variable can also hold string object.

***Question-3***:*Describe three different data types.*

1-***Int Data type***:Any integer whether it’s a positive or negative is of int data type.

e.g.,if we assign 7 to a variable x.Then type(x) will become int.

2-***String data type***:String Is a sequence of characters enclosed in a single or double quote.

e.g.,If I assign “Hello” to a variable y,then type(y) wll become str.

3-***Float data type:***Any number having decimal point is considred as a float.

e.g.,If I assign 8.0 to a variable z,then type(z) will become float.

***Question-4***:*What is an expression made up of? What do all expressions do****?***

***Answer-4:*** An expression is defined as a combination of constants,variables and operators.An expression always evaluates to a value.A value or a standalone variable can also be considered as an expression but a standalone operator is not an expression.

***Question-5***:*This assignment statement, like spam = 10. What is the difference between an*

*expression and a statement?*

***Answer-5:***An statement is an instruction which can be executed to perform a certain task while as expression is a combination of constants,variables and operators.In spam=10,we are assigning expression 10 to a variable spam by the the given assignment statement spam=10.

***Question -6:*** *After running the following code, what does the variable bacon contain?*

*bacon = 22*

*bacon + 1*

***Answer-6:***The variable bacon will not be changed as the expression bacon+1 has not been assigned to the variable bacon.

***Question-7:****What should the values of the following two terms be?*

*‘spam’ +’spamspam’*

*‘spam’ \* 3*

***Answer-7:*** ‘spam’ +’spamspam’ is an expression for concatenating ‘spam’ with ’spamspam’.Therefore.it will result in ‘spamspamspam’.’spam’\*3 is the repetition of the string ‘spam’ three times.It will also give the same result.

***Question-8:*** *Why is eggs a valid variable name while 100 is invalid?*

***Answer-8:***eggs start with an alphabet which is allowed in Python while 100 starts with a digit which is not allowed.

***Question-9:****What three functions can be used to get the integer, floating-point number, or string*

*version of a value?*

***Answer-9:int()***  can be used to get the integer version of a value,***float()*** can be used to get the floating point number version of a value and lastly ***str()*** can be used to get the string version of a value.

***Question-10:****Why does this expression cause an error? How can you fix it?*

*‘I have eaten ’ + 99 +’ burritos.’*

***Answer-10:*** In the given expression,a string cannot be concatenated with an integer value as Python follows strong typing.For the correct concatenation, we need to enclose 99 within either single quotes or double quotes otherwise Python will throw an error message.