**ANSWER SHEET**

**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.**

Ans:

\* Mathematical operator (can also be used for concatenation and other manipulations)

'hello' String

-87.8 Float

- Mathematical operator

/ Mathematical operator

* Mathematical operator (can also be used for concatenation

6 Number

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

Ans:

A string is basically a list of character (needs to be put inside quotes in python ) whereas a variable is like container which holds a stored value in some memory location .

var1 = ‘String’

Here ‘Var1’ is a VARIABLE which holds a STRING datatype as its declared inside quotes

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

Ans:

1. different data types can be numeric type , sequence type , Boolean type
2. numeric type: This kind of datatype holds all numeric values for example decimals , complex numbers etc.
   1. Int() : holds integer , a = 3
   2. Float() : holds number with decimal values , b = 3.33
   3. Complex() : holds complex numbers , c = 5+3j
3. Sequence Type: we have list ,tuple
   1. List() : it can hold multiple items in a single variable , items can be duplicate.

a list are indexed and mutable and declared inside [] ,

ex: a = [1,2.4,’mad’,4+5j]

* 1. Tuple: it also can hold multiple variables of different types , it also can hold duplicate values. A tuple is also indexed but non mutable (i.e: can’t be changed by direct declaration) . tuples are declared inside ().

ex : a2 = (1,2.4,’mad’,4+5j)

1. Boolean Type: we have Boolean data type which holds True / False

Ex: a = True

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

Ans: well an expression can be anything in which compiler completes a task and returns a result , ex : 9+8. Python will return 17 but if we write var2 = ‘tell me a name’ this is not an expression

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

Ans: this is an assignment statement as it will not return anything , it just tells python that to assign integer 10 to spam variable

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

**bacon = 22**

**bacon + 1**

Ans: 22 only as its not yet assigned

**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: In python a variable name must start with a letter or ‘\_’ , so 100 can’t be a variable name

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

Ans: int() : for integer , float() : for decimal values , str(): for string values

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

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

Ans: this happened due to improper use of quotes,

“**'I have eaten ' + 99 + ' burritos.”** Will work