**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:

1. \*: Expression
2. 'hello': Value
3. -87.8: Value
4. - : Expression
5. / : Expression
6. + : Expression

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

Ans: A string is a value which can be given to any variable. Variable is the name given to an address location which makes it easy to access.

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

Ans: The various different data types are:

1. INT: This datatype saves data in integer format. These are numerical values.
2. STR: This datatype could allow anything in the string format or commonly called as text format.
3. DOUBLE: This datatype contains values which are in decimals.

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

Ans: Expressions are made of variables or constants along with operators. They are used to perform operations on various values. Expressions are mainly used to evaluate after performing some operations.

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

Ans: A statement assigns the right hand side value to the left hand side variable. Expressions are used to evaluate using operators like +, -, / etc. Expressions do not assign anything to the variable.

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

**bacon = 22**

**bacon + 1**

Ans: 22

Reason: In “bacon = 22” we assign value 22 to variable named bacon. While in the second line we have an expression bacon+1 which results value 23 but this value is still not assigned to bacon. Thus final value of bacon remains 22.

**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: eggs is a variable name because it follows all the conventions of variable naming. 100 is invalid because we cannot use numbers in a variable. Eggs if written in quotations would not work as variable name.

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

Ans:

1. Integer: int(value)
2. Floating-Point Number: float(value)
3. String: str(value)

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

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

Ans: String format could not be added directly to an integer. Only similar format expressions can be evaluated. To make it error free we can write

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