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.**

\*: Expression

'hello': Value

-87.8: Value

-: Expression

/: Expression

* : Expression

6: Value

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

String is the data stored in double or single quotes. Variable is a memory location which holds data like strings, integers, float etc.

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

Integers: This data type consists of positive and negative numbers along with 0.

Float: This data type consists of numbers with decimal value.

Strings: This data type is enclosed within single or double quotes. It mostly consists of texts

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

An expression is a combination of variables, values and operators. It can be evaluated. Printing an expression gives the evaluated value. The combination of values, operators and variables is evaluated down to a single value.

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

Expression is combination of values, variables and operators. It evaluates down to a single value. Example: 2 + 5 = 7. (2+5 is an expression which evaluates down to a single value 7)

Statement is an action or a command. Spam = 10, is an assignment statement used to assign the value 10 to the variable spam. print() is statement used to display the expression within the round brackets.

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

**bacon = 22**

**bacon + 1**

bacon contains the value 22 as assigned in the statement ‘bacon = 22’ hence **bacon + 1** = 23

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

'spam' + 'spamspam' 🡪 ‘spamspamspam’

'spam' \* 3 🡪 ‘spamspamspam’

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

Using constants as variable name will lead to conflicts. For example, if we assign 100 = 25,

100 + 25 will be 50, whereas the expected output is 125. Numbers are constants having their own unique value and making variable names with constants will complicate and conflict the code.

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

A value can be converted by enclosing inside the round braces to the respective datatype in the below function.

Integer🡪 int()

Float🡪 float()

String🡪str()

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

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

The above expression throws an error because concatenation of string and integers data type is not allowed.

Its can be fixed by enclosing 99 in single quotes or double quotes as shown below:

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