**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?**

A string is a collection of alphabets, words, or other characters while a variable is a symbolic name that is a reference or pointer to an object.

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

* Integer example 1,2 3 … without decimals.
* Float example 2.3, 12.45, …with decimals.
* Boolean has only 2 values. Example True, False or 1 or 0 respectively. They are mainly used in logical questions.

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

An expression is made up of constants, operators, and variables.

All expressions are interpreted to produce some other value.

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

An expression produces a value, and that value will be passed into the function while a statement does not produce a value, and so they can't be used as function arguments.

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

**bacon = 22**

**bacon + 1**

Variable bacon contains 22

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?**

Variable name eggs complies with the rules for python variables while 100 starts with a number and as per rules for python variables which are as below.

* A variable name must start with a letter or the underscore character
* **A variable name cannot start with a number**
* A variable name can only contain alpha-numeric characters and underscores (A-z, 0-9, and \_)
* Variable names are case-sensitive (age, Age and AGE are three different variables)

100 is not complying with the rules.

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

Int(), float(), str()

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

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

Its causing an error because 99 is not a string.

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