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 a data type which holds text or series of characters

Variable is a container which holds any specific value of any data type.

3. Describe three different data types.

Int, float and string are three data types

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

An expression is made up of combination of operations and variables or operands and can be interpreted by a compiler.

Expressions are used to evaluate to a single value

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

“Expression” is a combination of values and functions that are combined and interpreted by the compiler to create a new value and “Statement” is just a standalone unit of execution and doesn’t return anything.

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

bacon = 22

bacon + 1

Variable bacon would still contain 22, while the output on executing the code will be 23

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

'spam' + 'spamspam' – output is “spamspamspam”

'spam' \* 3 – output is “spamspamspam”

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

Variables can only be a single alphabet or words so eggs can be a variable where as 100 is an int value and cannot be treated as a variable.

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

Let the value be x

Integer – int(x)

Float – float(x)

String – str(x)

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

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

A “+” operator is used to concatenate two strings but here 99 is an int and we cannot concatenate a string with an integer. So, to make it correct we have to keep 99 as string so the correct expression would be - 'I have eaten ' + ‘99’ + ' burritos.'