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.

\*

'hello'

-87.8

-

/

6

**Answer :**

\* : Expression

'hello' : Value

-87.8 : Value

- : Expression

/ : Expression

+ : Expression

6 : Value

2. What is the difference between string and variable?

**Answer :**  A variable is a container that stores some information for use in a program. It can hold different types of data, such as numbers, text, and Boolean values. A string is a type of data that represents a sequence of characters. So, a string can be stored in a variable.

3. Describe three different data types.

**Answer :** a)**Integer**: An integer is a whole number that does not contain a decimal point. These can include positive, negative and zero numbers

b)**String**: A string is a sequence of characters.They are usually used to represent textual data such as a person's name, address, or description, and can also contain letters, numbers,special characters.

c)**Boolean:** A boolean data type only has two possible values: true or false. It is often used in

conditional statements or comparisons, and can help determine when certain actions or events should occur based on whether a specific condition or requirement is meet or not.

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

**Answer :** An expressions is a combination of variables, values, operations and calls to functions.

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

**Answer :** An expression evaluates to a single value. A statement does not. The statement is just like a command that a python interpreter executes like print.

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

bacon = 22

bacon + 1

**Answer :** After running the following code, bacon = 22

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

'spam' + 'spamspam'

'spam' \* 3

**Answer :** 'spam' + 'spamspam' gives 'spamspamspam' and 'spam' \* 3 also gives 'spamspamspam'

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

**Answer :** Because a variable name must start with a letter or the underscore character. So eggs is a valid variable name while 100 in not because it starts with integer.

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

**Answer :** int(), float(), str()

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

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

**Answer :** This expression causes an error because in this line 'I have eaten' and 'burritos' are strings, while 99 is as an integer. In order to fix the error and print 'I have eaten 99 burritos.', we need to write 'I have eaten' + '99' + 'burritos.'