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?

Ans- Variable is a named location used to store data in memory.

Strings in python are sequence or collection of character data.

e.g. name = “abc”

Here **name** is a variable and “**abc**” is a string.

3. Describe three different data types.

**Integer** – Integers are whole numbers. They can be positive or negative.

e.g.

a = 10

b = -20

**String** - Strings in python are sequence or collection of character data.

e.g.

fruit = “apple”

number = “123”

**List** – A list is an ordered collection of heterogenous items where we can store data elements. Elements are stored within square brackets[] separated by comma. It is mutable.

e.g.

list\_fruits = [“apple”, “orange”, “grapes”, “banana”]

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

Ans. An expression is a combination of operators and operands. Expressions are evaluated or interpreted to give some result.

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

Ans. An expression is a combination of operators and operands which are interpreted to give some resulting value.

e.g. x = 2 + 3

A statement in python is a logical instructions (can be group of expressions) which can be executed by python interpreter. There are several types of statements in python.

e.g.

# Conditional Statement

a = 2

if a > 0:

print(“it is positive”)

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

bacon = 22

bacon + 1

Ans. 22 (bacon will contain 22 only as we have not reassigned the value to it)

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

'spam' + 'spamspam'

'spam' \* 3

Ans. spamspamspam

spamspamspam (both will be same)

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

Ans. eggs is a valid variable name as it starts with a letter and does not contain any special character or spaces where as 100 is invalid as it starts with number.

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

Ans.

1. value1 = int(20)
2. value2 = float(20)
3. str1 = str(20)

print(str1 + "23")

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

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

Ans . String can only be concatenate with string not with integer.

Correct expression will be 'I have eaten ' + '99' + ' burritos.'