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**: A string in python is anything written between “double codes” or between ‘single codes’, while writing a code. A string can be anything some alphabetical text, numbers, special character or a combination of anything.

Example of string **print(“This is string”**), here in double codes the text passed is a string.

While variable is a container which stores some values such as string, integer etc, in the computer memory, varibles are mutable and there values can be chaged and we can also perform some operations on them. Like while doing programming we declare

X = 2

Y= “string”

Here x and y both are variables, in which one hold the value 2 and another one holds a string.

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

**Ans:** Three different data types are int, float, String.

Int: an integer is a which has some numerical values both positive and negative without decimal.

Float: float is data type generally used to store values with/without decimal places.

String: **print(“This is string”**), here in double codes the text passed is a string.

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

Ans: we can say an expression is a combination of variables, string etc.

such as

c = a + b is a expression of adding two value in a and b variable

a = “apples ”+ “Mangoes”

Expressions can perform operations such as addition, subtraction, concatenation, or any other required logical operation.

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

**Ans:** Expression can perform operations like addition, subtraction or any other logical operation, while a statement can perform actions like printing, assigning a value to a variable.

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

**bacon = 22**

**bacon + 1**

Ans: Bacon = 23

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

Ans: 'spam' + 'spamspam' 🡺 o/p spamspamspam

'spam' \* 3 🡺 o/p spamspamspam

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

Ans: Variable name cannot be an integer, that’s why 100 is an invalid variable name.

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

Ans:

* For integer, integer\_value = int(input("enter integer"))
* floating-point number, Float\_value = float(input("enter float"))
* string version, String\_version = input("enter the text"))

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

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

**Ans:** this expression causes an error because 99 is not a string, to make this expression work we need to make this integer as a string.

We can do this by adding double (“ ”) or single codes (‘ ’) to make it string.

The correct expression which will work without an error will be

'I have eaten ' + ‘99’ + ' burritos.'