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.

\*

I'hello'

-87.8

-

/

6

**Ans.**

Below are the mathematical operators:

\*, /,+

Below are the integer expressions:

-87.8, 6

Below are the string expressions:

I'hello'

2. What is the difference between string and variable?

**Ans.** In python programminga language, a string is written with double quote “ ” and even if an integer is enclosed with double quote then it is also considered as integer. Example: “Hello” and “2021”. The variable is a container wherein it stores the value or information of variable. Example: strA = ”Hello World”. strA is variable declared as string and Hello World is the information that it stores in it.

3. Describe three different data types.

Ans. Following are the three different Data type:

Integer: Such data type includes positive and negative integer numbers. Ex: 1 , 2 , 3 -5, -6

Float: Such data type is the integer number/value with decimal points such as 14.93, 16.9.

Boolean: In this data type, the built-in values are True and False.

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

Ans.

In programming language, an “expression” is **a combination of** values and functions **(operators) that are combined and interpreted by the compiler to create a new value**. Expressions are used in programming languages, database systems, and spreadsheet applications. For example, in database systems, expressions are used to specify which information we want to see. These types of expressions are called queries.

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

Ans. An expression evaluates to a single value. A statement does not evaluate.

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

bacon = 22

bacon + 1

Ans. The bacon variable is set to 22 so it contains integer value of 22. The bacon+1 expression doesn’t reassign the value in a bacon (that would need an assignment statement: bacon = bacon+1)

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

'spam' + 'spamspam'

'spam' \* 3

Ans. The value of the two terms will be like Spamspamspam and spamspamspam.

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

Ans. Eggs is valid variable name because variable name can’t start with any special character or integer number.

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

Ans. Following are the three functions used in python that convert and evaluate a value as per their respective version as any value is passed to these functions:

Int(), str() and float().

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

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

Ans. The given expression is incorrect because as per the concatenation rule, only string can be added up with another string using the ++ signs while 99 is an integer number so this expression will throw an error. The above expression can be re-written as follows:

‘I have eaten **‘+str(99)’+**burritos’