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 :**

|  |  |
| --- | --- |
| **Values** | **Expressions** |
| hello | \* |
| -87.8 | - |
| 6 | / |
|  | + |

2. What is the difference between string and variable?

**Answer :**

|  |  |
| --- | --- |
| **String** | **Variable** |
| It is a pre-defined datatype which represents text | It is a user-defined data type which stores some value |
| e.g. print(“Hello”) or print(‘Hello’)  x=”Hello” or x=’Hello’ | e.g. a=12.5, str1=”Pratiksha”, x=True, b=45 |

3. Describe three different data types.

**Answer** :

1. Integer – It is a positive or negative whole number. There is no limit to how long integer value can be.

E.g. x=34, y=12345678127653729

1. Float – It is a real number with floating point representation. It is specified by a decimal point.

E.g. a=45.56, b=56.076

1. String – It is a pre-defined or built-in datatype which represents text. The characters of string are put in single, double or triple quotes.

E.g. str1=”ABCD” , str2= ‘Hello, World!’

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

**Answer** :

An expression is a combination of values, variables, operators and operands that is interpreted to produce some other value. It evaluates to a single value i.e. after solving the expression we’ll get new single value as an output.

e.g. (i) print(5+4-8\*7) will give us -47

(ii) a,b=10,5

print(a/b)

Output => 2.0

5. This assignment statements, like spam = 10. What is the difference between an

expression and a statement?

**Answer** :

Expressions are something that reduced to some values but statements does not. Statements can be created to display some values or to create a variable. In short, expressions are instructions that executes.

E.g. spam=10 is a statement which displays value of spam as 10

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

bacon = 22

bacon + 1

**Answer** :

output = 22

(The value of bacon is 22. bacon + 1 doesn’t reassign the value of bacon as it needs assignment statement bacon=bacon+1.)

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

‘spam’ + ’spamspam’

’spam’\* 3

**Answer** :

‘spam’ + ’spamspam’ => spamspamspam

’spam’\* 3 => spamspamspam

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

**Answer** :

There are certain rules for naming variables in python and as per those rules variable names cannot begin with numbers.

9. What three functions can be used to get the integer, floating-point number, or string

version of a value?

**Answer** :

The int(), float(), str() functions will evaluate to integer, float and string version of a value passed to them.

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

‘I have eaten ‘ + 99 + ’ burritos.’

**Answer** :

It will give an error, as 99 is an integer and only strings can be concatenated with other strings with + operator.

( Correct way - ‘I have eaten ‘ + str(99) + ’ burritos.’ )