integer or string and expressions will be mathematical operators.
'hello' -87.8
/ +
6
Ans 1:
*expression
'hello'value
-87.8value
expression
/expression
+expression
6value
2. What is the difference between string and variable?
Ans 2: Variable is used to store the data, it can store int,float, boolean, string etc. E.g. A= 4, A = 'Ineuron' A = True A = 4.4 Whereas String is a literal text string e.g. 'Ineuron'

3. Describe three different data types.

Ans 3:

- 1. Numeric (represent the data which has numeric value.)
 - A. Integer (It contains positive or negative whole numbers (without fraction or decimal).)
 - B. Complex numbers (specified as (real part) + (imaginary part)j.)
 - Float (It is a real number with floating point representation. It is specified by a decimal point.)
- 2. Boolean (Data type with one of the two built-in values, True or False)
- 3. Set (unordered collection of data type that is iterable, mutable and has no duplicate elements.)
- 4. Sequence Type (ordered collection of similar or different data types)
 - A. Strings (A string is a collection of one or more characters put in a single quote, double-quote or triple quote.)
 - B. List (just like the arrays, is an ordered collection of data.)
 - C. Tuple(also an ordered collection of Python objects. The only difference between tuple and list is that tuples are immutable)
- 5. Dictionary (Dictionary holds key:value pair.)

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

Ans 4:

Expression is a combination of variables, operations and values that returns some result after expression is evaluated.

```
E.g. a = b+c # b=2, c=3
print(a) # a becomes 5
```

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

Ans 5:

> Expression is a combination of variables, operations and values that returns some result after expression is evaluated.

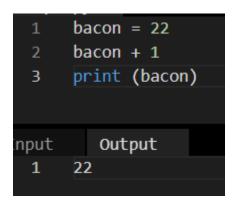
```
E.g. a = b+c # b=2, c=3
print(a) # a becomes 5
```

> Statements represent an action e.g print statements, assignment statements.

E.g. print 'hello', x = 1, spam = 10.

6. After running the following code, what does the variable bacon contain? bacon = 22

bacon + 1



At line 1: bacon is assigned value 22

At line 2: + operator is used to add 1 to the current bacon value i.e. 22

At line 3: bacon value is printed which comes to be 22 as , at line 2 , after the operation was executed result value wasn't assigned back to bacon variable.

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

'spam' +'spamspam'

'spam' * 3

Ans 7:

```
print('spam' + 'spamspam')
print('spam' * 3)

put
Output
spamspamspam
spamspamspam
```

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

Ans 8:

Eggs is valid variable name because it follows all rules of variable declaration for python i.e.

- Contains only one word with no spaces,
- Uses only letters/numbers/underscore character (for this case letters)
- Does Not begin with a number

100 is invalid variable name because variable name can't begin with a number.

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

Ans 9:

int(), float(), str() can be used to get the integer, floating-point number, or string version of a value respectively.

10. Why does this expression cause an error? How can you fix it? 'I have eaten '+ 99 +' burritos'

Ans 10:

+ operator is used to concatenate the multiple string values together,i.e. Concatenate str to str only

But in the given example 'I have eaten '+ 99 +' burritos' 99 is integer

```
Input Output
I print('I have eaten'+ 99 +'burritos')

Input Output
I Traceback (most recent call last):
2   File "script.py", line 1, in <module>
3      print('I have eaten'+ 99 +'burritos')
4   TypeError: can only concatenate str (not "int") to str
```

Hence it is giving error

If 99 is changed to string, this statement will work perfectly fine

```
script.py
1 print('I have eaten '+ str(99) +' burritos')

Input Output
1 I have eaten 99 burritos
```