1. What are the differences between operators and values in the following?

\*

'hello'

-87.8

-

/

+

6

Ans: operators are pre-defined syntax/symbol which help us to do data manipulation with variables or values within our program or application. There are several operators exist such as

1. Arithmatic operators
2. Logical operators
3. Assignment operators
4. Comparison operators
5. Bitwise operators etc.

Here, In above this are operators: \*, -, /, + and

Values are : -87.8, 6, ‘hello’

2. What is the difference between string and variable?

spam

'spam'

Ans: String contain values in sequence of character strings whereas variable can store any type of data and later they become data specific type variable.

For example, in above case

1. We can say spam is a string variable
2. ‘spam’ is text/string value will assign to any variable then it data type become string.

3. Describe three different data forms.

Ans: There are multiple data types exist in python language as follows:

1. Text type: contains only text values.
2. Numeric types: contains int, float, complex
3. Boolean type: bool values
4. Sequence type: list, tuple, range etc.
5. Mapping type: dict
6. Set type: set, frozenset etc.

4. What makes up an expression? What are the functions of all expressions?

Ans: Expression: This are instructions which combines values , variable, and operators and gives us single value as a result. For example

>>> 5 +5 will give us 10 as an result

5. In this chapter, assignment statements such as spam = 10 were added. What's the difference between a declaration and an expression?

Ans: When we declare any statements with respect to any values, In that case python interpreter only knows about them unless we execute them for answers. Means we don’t need to evaluate them.

Whereas expression are instructions(values+variable+operators) inside program. This expression needs to evaluates so we can achieve something out of it. Python interpreter does this for us while compiling our source code.

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

bacon = 22

bacon + 1

Ans: When we run the above code we will get 23 as updated value of bacon.

bacon will be 23

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

'spam' + 'spamspam'

'spam' \* 3

Ans: when we execute above programs we will gate same result for both cases such as 'spamspamspam'

8. Why is it that eggs is a true variable name but 100 is not?

Ans: In python language you can not define variable names with start numbers. Python has rules to define variables which must start from alphanumeric or underscores.

9. Which of the following three functions may be used to convert a value to an integer, a floating-point number, or a string?

Ans:

1. int() : convert a value to an integer
2. float() : convert a value to an float
3. str(): convert a value to an string

10. What is the error caused by this expression? What would you do about it?

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

Ans: When we ran this we will get an error as follows:

Traceback (most recent call last):

File "<stdin>", line 1, in <module>

TypeError: can only concatenate str (not "int") to str

>>>

In python we can not do concatenation on string & integers together.

We can achieve this by following methods:

1. str() : convert integer to new string, help us to concatenate with string variables
2. Format(): help us to concatenate with string variables