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 are : 'hello', -87.8, 6

Expressions are: \*, -, /, +

2. What is the difference between string and variable?

ANSWER:

String is one of the builtin data type which stores sequence of unicode code values, comprising of alphanumeric

values and other language specific characters like ä,ö,& etc. Its a iterable data type. The first position of the string variable starts at 0. Strings are represented within single/ double/ triple quotes.

Variable is reference name given to store the value of a data type. Variable names can start with \_ or alphabets, followed with numbers and not whitespaces. The scope of variable can be global or local, depending upon the level of scope defined at function, class, package levels.

Example: \_abc = 'abc' #here \_abc is the variable of type string, storing value abc.

def = 123 #here def is the variable of type integer, storing value 123.

3. Describe three different data types.

ANSWER:

1. Integer (int) - This data type stores numeric values without precision associated.

This values can be negative or positive. ex: 123, -45

2. Float (float) - This data type stores numeric values with precision associated. Ex: 123.45, -45.0

3: Boolean (bool) - This data type stores two type of values True or False. True is by default represented as 1

and False as 0. Though True can be any integer value, only if it is type casted as bool. Ex: bool(-1) is True

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

ANSWER:

Expression is evaluation of execution of a similar type of data types using an operator eg: mathematical

operators like + , -, \*. Expressions performs the evaluation of execution of the types in questions.

Ex: 'abc' + 'def' will concatenate the two str types to 'abcdef'. Also same operator will perform summation of

two integer values. Expressions can be mathematical like parenthesis, comprehensions, etc.

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

expression and a statement?

ANSWER:

Here, this assignment statement is assigning a value to variable 'spam', without any evaluation of performing

any operation before assignment. Whereas, if spam = 5+5, then 5+5 is treated as expression and value evaluated

afterwards will be treated as assignment.

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

bacon = 22

bacon + 1

ANSWER:

22

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

'spam' + 'spamspam'

'spam' \* 3

ANSWER:

Both will have values: spamspamspam

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

ANSWER:

Variable names are permissible to start with \_ or any alphabets, followed by any combination of alphabets, numbers.

Hence, eggs is a valid variable while 100 is not.

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

version of a value?

ANSWER:

int()

float()

str()

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

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

ANSWER:

In this expression, we are concatenating strings with integer. Hence the expression is invaild.

The fix is to type cast int to str.

'I have eaten ' + str(99) + ' burritos.'