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

**Ans:**

**Expressions: \* - / +**

**Values are below:**

**1.Integers: 6**

**2.Strings: ’hello’**

**3.Float: -87.8**

**===========================================================================**

2. What is the difference between string and variable?

**Ans: String is one of the data types in Python and variable is common thing it will works like store of information we can store anything in any variable by using assignment operators**

**EX: String – ‘Subash’, ’Ch’,” mcas”**

**EX: Variables- name = “Subash”, College = “mcas”, Age =22**

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3. Describe three different data types.

**Ans: There are many data types in python we can see three data types and explanation here:**

**Data types are Integer, String, Float**

**Integer-Integers are numbers only, whole numbers and positive, negative numbers are called as integers (Ex: 1,9086, -89,0,2,3,5...etc)**

**String –those values declared in inside single or double quotes are called as string. it’s included alphabets, numbers and all (Ex- “Subash”,’mcas’,’age’,’22’ name =’john’, age=’22’)**

**Float-A numbers those are have one or more decimal points are called as floating-point numbers in python. it’s included all positive and negative numbers as well (Ex:12.6, 2.0, 264.7, -7964.58, -1.0)**

**===========================================================================**

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

**Ans-Expression is all about mathematical operators.by using of expressions we can get new value based on the expressions**

**Ex-**

**a = 1,**

**b = 3**

**c = a+b**

**c = 4**

**-: we can do all operations like multiplication (\*), division (/ or //), subtraction (-), square (\*\*) etc…**

**===========================================================================**

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

**Ans:**

**Expressions-Expression is all about mathematical operators.by using of expressions we can get new value based on the expressions (spam = 10 “=” is expression)**

**Statements-Instructions or declarations are called statements.in python we have many statements type. spam =10 is assignment statement’s and we have if statements, for and while statements etc..**

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

bacon = 22

bacon + 1

**Ans: After running the above code the output will be 23 but the bacon value didn’t change it will hold the same value 22**

**==================================================================================**

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

'spam' + 'spamspam'

'spam' \* 3

**Ans: 'spamspamspam'**

**Explanation:-**

**'spam' + 'spamspam' = 'spamspamspam'**

**'spam' \* 3 = 'spamspamspam'**

**===========================================================================**

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

**Ans: In Python Variable names cannot starts with numbers that’s why its invalid. Eggs not begin with number so it’s a valid variable**

**===========================================================================**

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

**Ans-The three functions are int(),float(),str()**

**===========================================================================**

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

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

**Ans: In python we can’t concatenate str and int we can do that if both are same data types**

**But we can do type casting here and we can concatenate both int and str**

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