**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.**

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**'hello'**

**-87.8**

**-**

**/**

**6**

Ans-'hello', -87.8 and 6 are values and rest are expressions.

**2. What is the difference between string and variable?**

Ans-A string is a sequence of characters enclosed in single or double quotes, while a variable is a name that represents a value or expression. Variables can be assigned different values, while strings remain constant.

**3. Describe three different data types.**

Ans-Three different data types are:

Integer (int): A whole number, such as 6 or -3.

Float (float): A number with a decimal point, such as 3.14 or -2.1.

Boolean (bool): A binary value that can be either True or False.

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

Ans- An expression is made up of values, operators, and function calls that can be evaluated to produce a result. Expressions can also contain variables and literals. An expression can be as simple as a single value, or it can be a complex combination of values, operators, and functions.

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

Ans-An expression is a combination of values, operators, and functions that can be evaluated to produce a result, while a statement is a complete line of code that performs an action, such as assigning a value to a variable or executing a loop. An assignment statement like spam = 10 is a type of statement that assigns a value to a variable.

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

**bacon = 22**

**bacon + 1**

Ans-After running the code, the variable bacon contains the value 22. However, when the expression bacon + 1 is evaluated, it returns the value 23, but the variable bacon is still assigned the original value of 22.

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

**'spam' + 'spamspam'**

**'spam' \* 3**

Ans-The values of the two terms are:

'spam' + 'spamspam' results in 'spamspamspam' and 'spam' \* 3 results in 'spamspamspam'

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

Ans-In Python, variable names cannot start with a number, so 100 is an invalid variable name. The variable name eggs starts with a letter and therefore is a valid variable name.

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

Ans-The three functions that can be used to get the integer, floating-point number, or string version of a value are:

int(): converts a value to an integer

float(): converts a value to a floating-point number

str(): converts a value to a string

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

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

Ans-The expression 'I have eaten ' + 99 + ' burritos.' causes an error because it attempts to concatenate a string ('I have eaten ') with an integer (99) without first converting the integer to a string. To fix this error, the integer should be converted to a string using the str() function:

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