Q1. 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.

Ans1.

* \* = \* is a mathematical operator used for multiplication operation.
* 'hello' = It is String value.
* -87.8 = It is Float Value.
* - = - is a mathematical operator used for subtraction operation.
* / = / is a mathematical operator used for division operation.
* + = + is a mathematical operator used for Addition operation.
* 6 = 6 is a integer value.

---------------------------------X--------------------------------------------X------------------------------------------

Q2. What is the difference between string and variable?

Ans2. **Variable** is used to store the value and, **String** is a type of value.

---------------------------------X--------------------------------------------X------------------------------------------

Q3. Describe three different data types.

Ans3. Three Datatype:

* list = It is one of the datatype used to store the information in the form of list. Items separated by commas are enclosed within brackets [ ].
* Tuples = It is an ordered sequence of items sme as list. Unlike List , tuple is immutable. It is defined with Parentheses ().
* String = It stores characters. It can be represented by using single quotes or double quotes.

---------------------------------X--------------------------------------------X------------------------------------------

Q4. What is an expression made up of? What do all expressions do?

Ans4. **Expression:**  It is made up of Variables containing values , operators , methods etc. which are constructed according to syntax of language.

The Expression do nothing but the interpreter evaluates the expression and gives us the output.

Q5. This assignment statements, like spam = 10. What is the difference between an expression and a statement?

Ans5. A Statement does something. Statements represent an action or command. For ex. Print statements , if statements.

On the other hand , An Expression a combination of variables, operators etc. that yields a result value. For ex. 2+2 = 4

---------------------------------X--------------------------------------------X------------------------------------------

Q6. After running the following code, what does the variable bacon contain?

bacon = 22

bacon + 1

Ans6. After running this code, bacon will contain 22.

---------------------------------X--------------------------------------------X------------------------------------------

Q7. What should the values of the following two terms be?

'spam' + 'spamspam'

'spam' \* 3

Ans7. Both the terms will be equal to ‘spamspamspam’.

i.e. 'spam' + 'spamspam' = ‘spamspamspam’

'spam' \* 3 = ‘spamspamspam’

---------------------------------X--------------------------------------------X------------------------------------------

Q8. Why is eggs a valid variable name while 100 is invalid?

Ans8. Because eggs is string type and string can be variable and 100 is of integer type and integer can’t be a variable.

---------------------------------X--------------------------------------------X------------------------------------------

Q9. What three functions can be used to get the integer, floating-point number, or string version of a value?

Ans9.

* To get the integer version of value : **int(value)**
* To get the floating-point number version of value : **float(value)**
* To get the string version of value : **str(value)**

---------------------------------X--------------------------------------------X------------------------------------------

Q10. Why does this expression cause an error? How can you fix it?

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

Ans10. This statement is causing an error because you can’t concatenate integer….

To fix it , you need to get 99 into double quotes or single quotes to convert it into string.

'I have eaten ' + ‘99’ + ' burritos.' = ‘I have eaten 99 burritos.’