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 1** : values : 'hello', -87.8, 6

Expression: \*, - , /, +

2. What is the difference between string and variable?

**Ans 2**:

**Variable:** variables are symbols where we can save the value and it can be used in programming.

**String:** string is the data which can be stored in variable.

3. Describe three different data types.

**Ans 3**:

**String:** it is sequence of characters present in single or double quotes

**Integer:** It represents positive or negative whole numbers.

**List:** This datatype is used to save multiple items of different datatype in single variable.

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

**Ans 4**: Expression is made of different operators and operands. Eg : a + b, here ‘+’ is operator and a ,b are operands.

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

**Ans 5**: Above example is a statement as we are assigning value to variable, but no operation is carried out here, for any operation there must be some mathematical operator involved in the expression.

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

bacon = 22

bacon + 1

**Ans 6** : bacon = 23

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

'spam' + 'spamspam'

'spam' \* 3

**Ans 7** : 'spam' + 'spamspam' => spamspamspam

'spam' \* 3 => spamspamspam

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

**Ans 8:** A variable can start with a letter or underscore but cannot start with digit, therefore 100 is invalid name for variable.

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

**Ans 9:** For integers we use **int()**

For floating point number we use **float()**

For string we use **str()**

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

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

**Ans 10:** There would be type error as we are trying to add string with number.

We can fix this by type conversion i.e.

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