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-1: Values are ‘hello’, -87.8, 6 and Expression are \*, -, /, +

2. What is the difference between string and variable?

Answer-2: String are the values that are enclosed within quotes. E.g.: 'asdffd32434'

Variable is the name that stores values it can start with letter and underscore. e.g.: a = 4654 and \_a = ‘ads54’.

3. Describe three different data types.

Answer-3: Three different types of data types are Dictionary, Set, Numeric.

Dictionary: Dictionary is a data type that is made of key and value. Key and value are separated by colon :. Keys are unique. Dictionary can be made by function dict(). In dictionary data is stored within curly {} brackets.

Dict={'a':'asd',45:785,'s3':'78sd'}

Set: Set is a type of data set in which no element is repeated. It is formed by using function set(). We can place string and integer in a set and all the elements are separated by comma.

Set=('a',12,3,34,'b2','ff','4s')

Numeric: This is made up of integer, floating number and complex numbers.

Integers- It contains positive and negative whole numbers. a= int(1), b= int(-1)

Floating numbers- float(), it contains real numbers. f= float(-8.7), s= float(8.7)

Complex numbers- complex(), It contains complex numbers i.e. real + imaginary. c= 9+7j

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

Answer-4: Expression is made up of mathematical operators. All expressions do is produce value.

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

Answer-5: Difference between expression and statement is Expression gives result. Statement is line of code that makes the program.

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

bacon = 22

bacon + 1

Answer-6: Variable bacon contains 22

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

'spam' + 'spamspam'

'spam' \* 3

Answer-7: 'spam' + 'spamspam' will get the value ‘spamspamspam’

'spam' \* 3 will get the value ‘spamspamspam’

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

Answer-8: eggs is a valid variable as it starts with a letter and 100 is a integer, integer can’t be used for a variable name.

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

Answer-9: Functions that can be used to get integer is int(), floating-point number is float() and string is str().

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

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

Answer-10: Cause of the error is we cannot perform addition operation on string and integer. We can fix it by converting +99+ into string.

Like this: 'I have eaten ' '+ 99 +' ' burritos.'

Or like this: 'I have eaten + 99 + burritos.'