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) Operators: \*, -, /, +

Expressions: ‘hello’, -87.8, 6

2. What is the difference between string and variable?

Ans) String is a collection of numbers, alphabets etc and Variables are symbols that we can use to store information, like string is an information which we can store in a variable. single usually enclosed in Double quotes " " or single quotes ' '.

3. Describe three different data types.

Ans) Integer – int, it can be of any length and it contains numbers only

Floating point – float, it is a decimal value accurate up to 15 places 1 is an integer and 1.0 is a floating point.

List – list, is an ordered sequence of item, no necessary of same types, it can be of different types.

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

Ans) An expression can be made up of combinations of values, operators and functions. Expressions are representation, the language interpreter evaluates the expression and after that it shows results.

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

Ans) Expression always evaluates to itself, A value or a variable all by itself is also considered an expression, because these always evaluates to itself.

It does not change the state after evaluation

It always produces a value.

Ex – a = 4

a + 16

20

Statement - Any Instruction that a python interpreter can carry out is called a Statement

Every statement can be an expression.

It does change the state after evaluation

Statement may or may not produce result value/

Ex – spam = 10

Print(spam)

10

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

bacon = 22

bacon + 1

Ans) bacon +1 does not add a value in bacon which is set to 22, only value can be added if the code is like bacon = bacon + 1

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

'spam' + 'spamspam'

'spam' \* 3

Ans) Both value will be same as spamspamspam , the difference is in approach only where ‘spam’ + ‘spamspam’ is string concatenation and ‘spam’\*3 is string multiplication

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

Ans) In Python variable can’t starts with numbers and variable can only start with a letter or underscore, excluding the keywords.

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

Ans) int(), float(), str().

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

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

Ans) value – 99 is not a string function, if we wrote 99 in quotes like ’99’ than it will not show the error, for ex - 'I have eaten ' + '99' + ' burritos.'