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.

\* - expression

‘hello’ - value

-87.8 - value

- - expression

/ - expression

+ - expression

6 - value

2. What is the difference between string and variable?

Ans – A string is a data type in python which can be denoted by ‘ ‘ or “ “, any value which is parsed in single/double inverted commas will have a string data type. Whereas a Variable is like an empty container in which we can store any data type value whether it be string, int, float etc, also we can change the value of a variable from one data type to other.

3. Describe three different data types.

Ans -

1 string : – A string is a data type in python which can be denoted by ‘ ‘ or “ “, any value which is parsed in single/double inverted commas will have a string data type. Example – “hello”, “1”, “ b-12”.

2 integer – a integer is a data type which can only have integers as their value i.e. values cannot be in fraction or decimals and they are not passed in single or double inverted commas. Example : 2, 3, 999, 1000.

3 float – a float is a data type which can only have exact or fraction or decimals as their value and they are not passed in single or double inverted commas. Example: 2.0, 3.4, 999.99, 1000.05.

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

Ans- an expression is used to return a desired result. It can be a combination of a variable, mathematical operators, in-built functions and other values like strings, int etc. example – 2x+10\*2.9

5. This assignment statements, like spam = 10. What is the difference between an

expression and a statement?

Ans – a statement is a conclusion or a result which represents a single value and is derived from an expression, whereas an expression is not a single value it contains multiple operators and operands. Using expressions, we can derive or come to a statement.

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

bacon = 22

bacon + 1

Ans – the value of bacon will remain same as 22 as bacon+1 will not change the variable values as we are not assigning it to the bacon we are just using the bacon variable in an expression to get a desired result.

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

‘spam’ + ‘spamspam’

‘spam’ \* 3

Ans – answer for both will be ‘spamspamspam’

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

Ans - eggs here is a valid variable as it doesn’t have any value prior to it is assigned to some value. Whereas 100 is already an has some value in python and already has a data type i.e. integer data type. If we pass eggs – “eggs” then this cannot be a valid variable name as well as it has a data type of string.

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'

And this caused a typeerror as string objects can only be added to a string data type, to cure this we need to pass 99 as string type - 'i have eaten' + ‘99’ + 'burritos'