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(str)

-87.8 : Value(float)

- : Expression

/ : Expression

* : Expression

6 : Value (int)

2. What is the difference between string and variable?

Ans. Variables are placeholders where we can store data. A Variable can store a string as its value but we can not say the same for a string.

3. Describe three different data types.

Ans. Three fundamental data types: int() : integers are whole numbers that can be positive and negative (eg. A = 10, b = 30) ; float() : floats are decimal numbers (eg. B = -45.658), and str() : strings are sequences of characters usually comes inside of ‘ ’ or “ ”. eg(s = ‘Sudip’)

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

Ans. Expressions are made up of variables, values, operators, functions etc. eg. ‘x – 5 = 5’ is an expression an expression that sets the value of the variable x to 10. So basically expressions are fundamental building blocks that produces value or result.

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

Ans. A statement is a complete instruction that performs an action and does not produce a value. Here **spam = 10** is a statement that set a variable to a specific value. while statements execute actions , expressions produce a value.

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

bacon = 22

bacon + 1

Ans. 23

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

'spam' + 'spamspam' Ans. spamspamspam

'spam' \* 3 Ans. spamspamspam

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

Ans. Variable name cannot start with a number, however if we put underscore or any kind of alphabet or letters before 100 it can be used as a variable(like “abcd\_100”). On the other hand eggs contain only letters(str) that’s why it is a valid variable.

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

Ans. Int() , float() , str() respectively.

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

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

Ans. Either we can rewrite 99 as str(99) or write it within quotation mark like ‘99’ to fix the error.