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: \*,-,/,+ are expressions. ‘hello’,-87.8 and 6 are values

2. What is the difference between string and variable?

Answer: String is a datatype and a variable can be of any datatype like string, integer , float, Boolean etc.

3. Describe three different data types.

Answer:

1. Integer: This type of datatype stores values of type integer like 1,2,3 …
2. Boolean: This type of datatype stores values of value like True and False whenever a condition is satisfied or not satisfied
3. String : This type of datatype stores values which come under ‘ ’ or “ ” and can even accommodate values from other datatype as long as they are within these two types of quotes.

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

Answer: In any programming language , an expression is made of operators and operands which evaluate or compute a final value and that final value may or may not be assigned to a variable after computation.

Example : 2+3 = 5 . Here 2 and 3 are operands, + is an operator and 5 is the final value evaluated.

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

Answer: An expression evaluates to a specific/fixed value. Statements decide the action of our program flow direction like print , assignments etc.

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

bacon = 22

bacon + 1

Answer : Our value of bacon will still be 22 as in 2nd statement value was incremented by not assigned to any variable , so it will stay same.

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

'spam' + 'spamspam'

'spam' \* 3

Answer: Both the statements will give the same output i.e ‘spamspamspam’.

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

Answer: We can assign any string name as a variable name but if we assign an integer value to a variable and if same integer value is used in some expression for computation purpose , it will face some validation issues and our program will throw an error. More over , it has some technical history and it was decided we cannot use integer values in variables name’s starting.

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

Answer: For integer we have int(), for floating point number we have float() and for string we have str() in python.

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

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

Answer: We can use entire expression as ‘I have eaten 99 burritos’. This will fix our problem going forward.