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- value- -87.8,6,’hello’ and expressions is- -,/,+**

2. What is the difference between string and variable?

**Ans-**

|  |  |
| --- | --- |
| **String** | **Variable** |
| **A Variable is a store of information** | **String is a type of information which can be store in a Variable** |
| **string a class . reference datatype . it is used to represent text type data.** | **variable is any alphabet or gropu of alphabet which work as temporary storage locations , a variable is used to represent any value** |
| **Example- x= “kunal”, where “kunal” is a string.** | **Example- x= “kunal”, where x is a Variable.** |

3. Describe three different data types.

**Ans-**

1. **Boolean- Data type with one of the two built-in values, True or False. It is denoted by the class bool.**

**Example- True and False**

1. **String- A string is a collection of one or more characters put in a single quote, double-quote or triple quote. In python there is no character data type, a character is a string of length one. It is represented by str class. Python strings are "immutable" which means they cannot be changed after they are created**

**Example-**  **"hello"**

1. **Dictionary- A dictionary is a collection which is ordered\*, changeable and do not allow duplicates**

**Example- numNames={1:"One", 2: "Two", 3:"Three"}**

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

**Ans- A combination of operands and operators is called an expression. The expression in Python produces some value or result after being interpreted by the Python interpreter. An expression in Python is a combination of operators and operands. An example of expression can be : x = x + 1 0**

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

**Ans-** **An expression is something, while a statement does something. An expression is a statement as well, but it must have a return. In the statement above spam =10 contains a value.**

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

bacon = 22

bacon + 1

Ans- **the variable bacon contain the value 22. If it is bacon= bacon+1 then it will be 23.**

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

'spam' + 'spamspam'

'spam' \* 3

**Ans- Both result will be ‘spamspamspam’**

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

**Ans- Variable cant be numeric in nature. Eggs is a alphabetic in nature so this can be variable. But 100 is numeric in nature so that cant be variable.**

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

**Ans- The int() , float() , and str( ) functions will evaluate to the integer, floating-point number, and string versions of the value passed to them**

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

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

**Ans- The expression causes an error because 99 is an integer, and only strings can be concatenated to other strings with the + operator. It can be fix with putting 99 in ‘ ‘ like ‘99’, so it will be string and it will not show any error.**