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:- Values:** 'hello', -87.8, 6

**Expression:** \*, -, /, +

2. What is the difference between string and variable?

**Ans:-** A **string** is a **data type** that represents **text**. It is a sequence of characters enclosed in quotes: "Hello" or ‘Python’. Whereas A **variable** is a **container** or **name** used to store data, including strings, numbers, or other types. You can assign a string to a variable.

For Ex: my\_string = "Python is a beautiful language"

Here, my\_string is variable and "Python is a beautiful language" is string that assign to my\_string.

3. Describe three different data types.

**Ans:- Three data types are :**

1. **String(str):** A **string** is a **data type** that represents **text**. It is a sequence of characters enclosed in quotes: "Hello" or ‘Python’.
2. **Integer(int):** Integer is used to represent whole numbers without decimal.
3. **Float(float):** Float is used to represent decimal number.
4. What is an expression made up of? What do all expressions do?

**Ans:-** An expression is made up of value, variables, operators, and function call.

All expressions are evaluated to produce a value or evaluate to (or return) a value

, whether it is a number, a string, a Boolean, or something else.

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

expression and a statement?

**Ans:- Expression** is a piece of code that returns a value and one can evaluate an expression and it will return a result. For ex: 5 + 6, “Danish” + “Python”; whereas a **statement** is a complete instruction that an interpreter can execute, it may include expressions, but a statement does not necessarily return a value. For ex: spam = 10

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

bacon = 22

bacon + 1

**Ans:-** bacon = 23

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

'spam' + 'spamspam'

'spam' \* 3

**Ans:-** 'spam' + 'spamspam' 🡪 'spamspamspam'

'spam' \* 3 🡪 'spamspamspam'

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

**Ans:- Eggs** is a valid variable name because it starts with letter and **100** is invalid because it starts with number. Variable name can always start with letter aur underscore not with a number.

9. What three functions can be used to get the integer, floating-point number, or string

version of a value?

**Ans:-** Three function that we can use is int(), float(), and Str() to get the integer, floating-point number, or string version of a value respectively.

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

'have eaten' + 99 + 'burritos.'

**Ans:-** The above expression will throw an error because a string can only concatenate with the string. Here, we are trying to concatenate string with integer that python wouldn’t allow.

We can fix it by typecasting the given integer 99 in above expression like:

'have eaten ' + str(99) + ' burritos.'