**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' - is string

-87.8 is integer

- is mathematical operators

/ is mathematical operators

* is mathematical operators

6 is integer

**2. What is the difference between string and variable?**

Ans : A string is a literal text string, i.e. 'Hello'.

A variable is something that stores data (per se) - it can store a string, int, float, class, etc.

we can change the variable value.

**3. Describe three different data types.**

**Ans**

**Enumerated type (enum)**

**It contains a small set of predefined unique values (also known as elements or enumerators) that can be compared and assigned to a variable of enumerated data type.The values of an enumerated type can be text-based or numerical. In fact, the boolean data type is a pre-defined enumeration of the values true and false.For example, if rock and jazz are the enumerators, an enumerated type variable genre can be assigned either of the two values, but not both.**

**Assuming that you are asked to fill in your preferences on a music app and are asked to choose either one of the two genres via a dropdown menu, the variable genre will store either rock or jazz.**

**With enumerated type, values can be stored and retrieved as numeric indices (0, 1, 2) or strings.**

### Boolean (bool)

It represents the values true and false. When working with the boolean data type, it is helpful to keep in mind that sometimes a boolean value is also represented as 0 (for false) and 1 (for true).

### Character (char)

### It is used to store a single letter, digit, punctuation mark, symbol, or blank space.

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

**Ans**

An expression is a combination of operators and operands that is interpreted to produce some other value. In any programming language, an expression is evaluated as per the precedence of its operators. So that if there is more than one operator in an expression, their precedence decides which operation will be performed first. We have many different types of expressions in Python.

1. **Constant Expressions:**These are the expressions that have constant values only.

**2. Arithmetic Expressions:**An arithmetic expression is a combination of numeric values, operators, and sometimes parenthesis. The result of this type of expression is also a numeric value. The operators used in these expressions are arithmetic operators like addition, subtraction, etc. Here are some arithmetic operators in Python:

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

**Ans :**

**Expressions only contain identifiers, literals and operators, where operators include arithmetic and boolean operators, the function call operator () the subscription operator [] and similar, and can be reduced to some kind of "value", which can be any Python object.**

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

bacon = 22

bacon + 1

Ans O/p is 22

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

'spam' + 'spamspam'

'spam' \* 3

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

**Ans :**

Because variable names cannot begin with a number.

**Rules for Python variables:**

A variable name must start with a letter or the underscore characterA variable name cannot start with a number

A variable name can only contain alpha-numeric characters and underscores (A-z, 0-9, and \_ )

Variable names are case-sensitive (age, Age and AGE are three different variables)

**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: In python + operator use to merge two or more string into one string. If we want to concatenate string with number then we must convert number into string.**

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