

**CLASS VII - COMPUTER SCIENCE NOVEMBER MONTH NOTES****CHAPTER - 7 : BASICS OF PYTHON****A. Tick() the correct option.**

1. Which of the following symbol is used to insert a comment in a program in Python?  
(a) #
2. Keywords must be written in  
(b) Lower
3. Which of the following function is used to convert a string into a floating point number?  
(b) float()
4. Which of the following is a relational operator?  
e) Both(a) and (b)

**B. Fill in the blanks.**

1. Each component in a Python program is called a Token.
2. A Prompt is used to display a message in the input() function.
3. Python uses ASCIT/Unicode character set.
4. Boolean literals have two values, true and false.

**C. Write 'T' for true and 'F' for false for the following statements.**

1. Tokens are also called variables. F
2. You can use keywords to name a variable. F
3. Relational operators are used to compare values. T
4. You cannot perform arithmetic operations on strings. T

**D. Define the following:****1. Token**

A computer program also contains a set of programming statements. A statement is composed of various components. Each component of a programming statement is called a token.

**2. Literals**

In a Python program, some values remain fixed throughout the entire program. Such values are called Literals or Constants.

### 3. Input()

The input() function is used to provide the input to the program. You can also add a message that prompts the user what input they should type. This message is called prompt.

### 4. Float()

The float() function is used to convert an integer value into a floating point number.

## E. Short answer questions

### 1. What is the use of variables?

A variable is a named location in the computer memory used to store a value.

Variables can then be used in the program for further calculations.

A variable in a program is like a container that stores a value in it.

We can store integer, character or decimal values in a variable.

### 2. What is a keyword? Name any two keywords.

- Keywords are reserved words that have special meanings. Therefore, we cannot use keywords as names for variables and methods that are used in a Python program.
- Python is a case-sensitive language.
- The two keywords used in Python are:
  - Assert
  - break

### 3. What is the use of relational operators?

Relational operators are used for comparing the values. It either returns True or False according to the condition. These operators are also known as comparison operators.

### 4. Write the names of logical operators.

Logical operators perform Logical AND, Logical OR and Logical NOT operations. The names of logical operators are:

- OR
- AND
- NOT

## F. Long answer questions

### 1. Explain data types using examples.

- Every variable has a data type in Python.
- Python decides the type of data of a variable by the value assigned to it.
- The basic data types available in Python are listed below.
  - Numeric Data Types: They are used to represent numbers.
  - Integers (int): The int data type contains whole numbers or integers that can be positive, negative or zero. Examples: -120, -54, 564
  - Floating Data Type (float): The float data type contains a number with a decimal point and it can be positive, negative or zero. Examples: 65.6, -32.6, 0.324
  - String Data Type (str): These are used to represent a collection of one or more characters enclosed by single quotes or double quotes. Examples: "Computer", 'A'.

## 2. Explain various arithmetic operators in Python using an example.

Operators are special symbols in Python that are used to calculate values. Python provides the following types of operators.

- Arithmetic Operators: Arithmetic operators are used to perform mathematical operations. + Addition, - Subtraction, \* Multiplication, / Division, %Modulus, \*\* Exponentiation.
- Assignment Operators: These operators are used to assign value to the variables. = Assign the value from the right side to the variable, += Add and assign the value to the variable, \*= Multiply and assign the value to the variable, /= Multiply and assign the value to the variable.
- Relational Operators: These operators are used to compare values. > Greater than, < Less than, >= Greater than or equal to, <= Less than or equal to, == Equal to, != Not equal to.
- Logical Operators: Logical operators perform Logical AND, Logical OR and Logical NOT operations. OR If one of the operands is true then the condition becomes true, AND If both the operands are true then the condition becomes true, NOT Reverse the state of the operand.

## 3. What is the purpose int() function? Explain with an example.

- If you enter a numeric value in the input ( ) function, the Python interpreter considers it as a string.
- And you cannot perform calculations on strings.
- For this, you can use the int() while entering a numeric value with the input statement. The int() function converts a specified value into an integer.

Example:

```
num1=int(input("Enter the value of number 1 is"))
num2=int(input("Enter the value of number 2 is"))
print("Sum of numbers is", num1+num2)
print("Difference between two numbers is", num1-num2)
```

Output:

```
Enter the value of number 1 is 30
Enter the value of number 2 is 10
Sum of number is 40
Difference between two numbers is 20
```

## 4. What is the significance of comments in Python programs?

- You can add documentation to your program to help non-programmers to understand the program code. This documentation is called comments.
- Python interpreter does not execute the comment statements.
- They are ignored by the Python interpreter.
- To make a statement as a comment in Python, a '#' symbol is used.

Example:

```
#A program to calculate the remainder
num1=int(input("Enter the value of number 1 is"))
num2=int(input("Enter the value of number 2 is"))
print("Remainder of two numbers is", num1%num2) # The % operator is used to calculate the remainder
```

Output:

```
Enter the value of number 1 is 15
Enter the value of number 2 is 2
Remainder of two number is 13.
```