ANSWER KEY

Exercises

A.	1. b	2. a	3. a	4. a	5. a
B.	1. control	2. if...elif	3. built-in	4. for	5. math
C.	1. False	2. False	3. False	4. True	5. True
D.	1. d	2. a	3. b	4. e	5. c

E. 1. i. exp(): It returns exponential value of a number.

ii. sqrt(): It returns the square root of a given number.

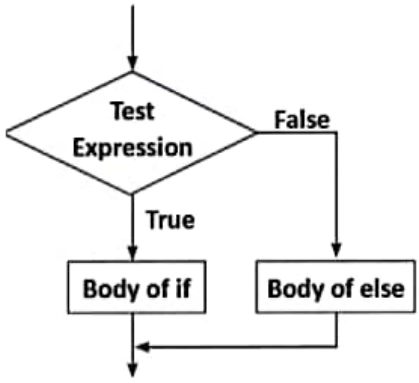
2. Syntax:

if test-expression:

statement

else:

statement



3. The import statement is used to import a module in the program. For example, to use math functions in a Python program, type import statement at the top of the program as: import math
4. The spaces or tabs (whitespaces) given at the beginning of the lines are called indentation.
5. Ceil() is used in print statement for integer.

F. 1. a. floor(): It is a functions of math module. It returns an integer that is less than or equal to the specified decimal number.

b. pow(): It raises the base number to the specified power and returns the calculated value.

c. fabs (): It returns absolute value of the given number. The argument may be an integer or a floating-point number.

d. fmod(): It is used to find the remainder of a division expression (i.e. 5% 2 = 1). It provides a more accurate implementation for floating point values.

2. The if statement performs an action only

when the test - expression (condition) is True.

Otherwise the action is skipped.

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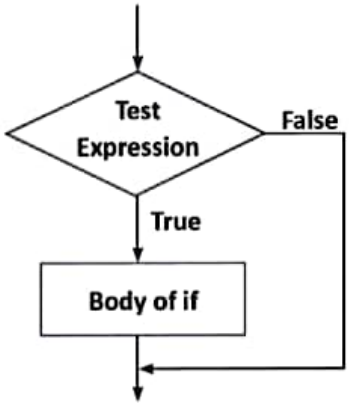
statement



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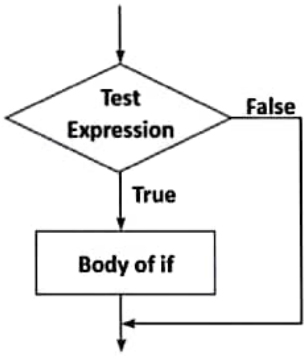


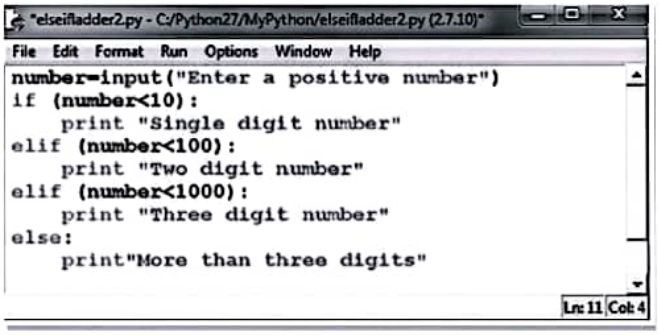
Syntax:

if test-expression:

statement

3. if…elif is used when you have multiple conditions to check. It checks the test- expression from the top to down and executes a block of statements as soon as one of the test-expression (either of the if or elif) evaluates to True. If all the conditions evaluate to False, else block gets executed.

Example:



4. A control statement determines whether other statements will be executed or not. In other words, it makes possible to make decisions, to perform tasks repeatedly or to jump from one section of code to another.

There are two types of control statements

i. Decision-making statements

ii. Looping statements

5. • **Decision-making statements:** Decision making statements are also known as branching statements. These are used in a program when you need to execute or ignore a block of statements based on certain conditions. If, if..else, if…else..if or elif and nested if are examples of decision making statements.

• **Looping statements:** Looping statements are defined in a program when you need to execute a certain number of statements repeatedly. Loops decrease the length of the program. While and for are examples of looping statements.

Brain Teaser

A.

Functions	Examples	Outputs
1. exp() /	math.exp(2)	7.38905609893
2. sqrt()	math.sqrt(2)	1.41421356237
3. factorial()	math.factorial(4)	24
4. trunc()	math.trunc(7.04)	7
5. fmod()	math.fmod(7,4)	3