CLASS 11

CH-4 CONDITIONAL AND ITERATIVE STATEMENTS

QUESTIONS:

1. What is a statement? How many types of statements are there in Python?
2. What is a compound statement? Give example of a compound statement.
3. What is the significance of a pass statement?
4. What are the three constructs that govern statement flow?
5. What is the need for selection and looping constructs?
6. How does a conditional expression affect the result of if statement?
7. What is a selection statement? Which selection statements does Python provide?
8. Can a single break statement in an inner loop terminate all the nested loops?
9. What is the significance of break and continue statements?
10. What is the similarity and difference between for and while loop?
11. Suggest a situation where an empty loop is useful.
12. What are iteration statements? Name the iteration statements provided by Python.
13. What are jump statements? Name them.
14. What is the difference between else clause of if-else and else clause of python loops?
15. What is entry-controlled loop?
16. What are the four elements of a while loop in python?

ANSWERS:

1. Statements are the instructions given to the computer to perform any kind of action, be it data movements and be it making decisions or be it repeating actions. There are three types of python statement. Empty statement, simple statement (single statement) and compound statement.

2. A compound statement has a header ending with a colon and a bod containing a sequence of statements at the same level of indentation. For instance, if, for, while etc,

   For I in range(5):

       Pass

3. The pass statement of Python is a do-nothing statement i.e., empty statement or null operation statement.

4. The three constructs that govern statement flow are:
   Sequence, Selection and Iteration (Looping)

5. Selection construct helps in making decision about which set of statements is to be executed. Looping construct helps in the execution of set of statements that are to be repeated again and again.

6. If the conditional statement is True, then the code blocks inside the 'if' statement is executed otherwise not.

7. Selection statement is used to make decisions. 'if' statement is provided by python.

8. No. A break statement only terminates the loop in which it is being executed and not all the nested loops.

9. Break statement is used to exit out of the loop. Continue statement is used to start the next Iteration.

10. Similarity is that both are used to execute statements repeatedly, both can use the break or continue statement. Difference is that 'for' is a counting loop 'while' is an entry-controlled loop.

11. An empty loop can be used to make the program wat for a certain amount of time while other functions are being run.

12. The iteration statements allow a set of instructions to be performed repeatedly until a certain condition is fulfilled. Python provides 'for' and 'while' iteration statements.

13. Jump statements in python are used to alter the flow of a loop when you want to skip a part of the loop or terminate the loop. Jump statements in python are:
    Pass, Break and Continue.

14. 'else' clause of if-else is executed when the if condition is False while 'else' clause of loops is executed when the loop doesn't terminate using a break statement before its completion.

15. A loop which has a control over the entry in the loop in the form of test conditions is called an entry-controlled loop. E.g. while loop.
    Example:
    a=5   #Initialization
    While a>0:   #Test Expression
        Print(a)   #Body
        a -=1   #Update Expression

16. The four elements of a while loop in python are: Initialization Expression, Test Expression, The Body-of-the-loop, Update Expression. Example: (refer to Qn15 answer)