INDIAN SCHOOL AL WADI AL KABIR

Class: VIII	Department: Computer Science	Year: 2025-2026
Handout	Subject:Computer Science Topic: ControlStructures	

1. What are control structures in Python?
   A control structure is a programming construct which affects the flow of the execution of a program.
2. Name the three types of control structures.
   Sequential Statements
   Conditional Statements
   Iterative statements
3. What are sequential statements?
   The statements that are executed in sequential order ,i.e., one after the other without any jumps, are called sequential statements.
4. What is a conditional statement?
   A conditional statement helps to implement decision-making in a program. These statements always result into two outcomes based on specific conditions given by the user. If the condition is true, the code gives out the first outcome but, if it's false, the second outcome is returned.
5. How many types of conditional statements are there in python? Write their names.
   Some types of the conditional statements are:
   • if Statement
   • if-else Statement
   • if-elif-else Statement
6. Write the purpose of iterative statements in Python?
   Iterative statements allow us to execute a set of code repeatedly as long as a specified condition is true. These are mainly used when we need to run the same code again and again.
7. Write the difference between if and if-else statement.
   In if statement, the program evaluates the test expression and will execute statement(s) only if the test expression is True; if the test expression is False, the statement(s) is not executed. Whereas in if-else statement, 'if' statement evaluates the test expression and will execute the body only if the test condition is True; if the condition is False, the body of 'else' is executed.
8. Write the syntax of if-elif-else statement

if condition1:
   statement1
elif condition2:
   statement2
elif condition3:
   statement3
else:

       statement4

9. Write the syntax of the for loop.

      The syntax of the for statement is given below:

    for <counter variable> in range(start, stop, step_size):

     Statements

10. Write the syntax of the while loop.

    The syntax of while statement is given below:

    while (test expression):

     Statements

    increment/decrement expression

11.   Write the output of the following:

   a)   for num in range (-10,0,1):

             print(num)

<u>output</u>

-10

-9

-8

-7

-6

-5

-4

-3

-2

-1

   b)   count=0

      While (count<5):

        count=count+1

       print("Orange Education")

<u>output</u>

    Orange Education

    Orange Education

    Orange Education

    Orange Education

    Orange Education

12.Define range function in Python.Ecxplain with syntax.

    The range function is an in-built function in python. This function generates a sequence of numbers. A sequence is a succession of values bound together by a single name.

    The range() function is generally used in the for loop to iterate over the sequence of numbers.

    The general syntax of using the range function is given below.

    range (start,stop,step_size): The **start** specifies the starting point for generating numbers. By default ,it starts from 0.The **stop** specifies the position up to which the numbers are to be generated(last number is not included).The **step_size** specifies the increment or decrement. By default, the value of the step_size=1 and numbers are generated with an increment of 1.