Wada Nirmiti Education Society's

GURUKUL GLOBAL SCHOOL

WORKSHEET

SUB: COMPUTER **LESSON:5. Iterative Statements in Python** **STD: VIII**

NAME: _____ ROLL No: _____ DATE:

Q.1 Fill in the blanks.

[for, while, in, range, Iterative, start, test, step]

1. _____ statements keep repeating themselves as long as a given condition is true.
2. The _____ loop is used when you are sure about how many times a loop body executes.
3. In Python, the working of the 'for' loop is based on sequences and _____ functions.
4. The _____ operator is used to check whether a given value exists in a sequence or not.
5. The _____ function in Python is helpful in generating a sequence of numbers.
6. An iterative statement is based on a _____ value, a test condition, and a step value.
7. By default, the _____ value in a loop is incremented by 1.
8. The _____ loop can be applied to a program where the number of iterations is not known beforehand.

Q.2 Match the Following.

1.Definite Loop	A.It evaluates to true if it finds a value in a specified sequence
2. Control Variable	B. Statement block containing actions required to repeat or iterate
3. Start Value	C. Another name commonly given to the standard 'for' loop structure
4. Test Condition	D. The numeric value by which a loop counter changes per iteration
5. Step Value	E. Initial value assigned to a loop counter at the beginning
6. Loop Body	F. Keeps track of the number of repetitions completed by a loop
7. 'in' Operator	G. Conditional expression that determines when a loop terminates
8. 'while' Loop	H. Deployed when the absolute number of repetitions is unpredictable

Q.3 Select the correct answer.

1. Which of the following is NOT a core component of an iterative statement?

a) Start value b) Test condition c) Print statement

2. What value does the 'in' operator return if a given number exists in the specified sequence?

a) False b) True c) Null

3. Which function generates a continuous sequence of numbers from 0 up to one less than the specified value?

a) print() b) input() c) range()

4. What output is produced by executing the statement: print(10 in [1, 2, 3, 10])?

a) False b) True c) 10

5. Which statement is used to repeatedly execute a block of code as long as a specific condition evaluates to true?

a) conditional b) while c) sequence

6. What is the output range generated by the function expression range(10)?

a) 1 to 10 b) 0 to 10 c) 0 to 9

7. What happens to the control variable after each repetition of a loop body concludes?

a) It resets to 0 b) It updates by step value c) It terminates completely

8. In the statement "for i in range(10, 20, 3):", what is the value of the step increment parameter?

a) 10 b) 20 c) 3

Q.4 Answer in one sentence.

1. What is the fundamental purpose of loops in programming?

_____

_____

2. Define what is meant by an iterative statement.

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3. Name the three critical values on which an iterative statement is based.

_____

_____

4. What role does a control variable play during loop execution?

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5. Name the two primary types of iterative statements supported in Python.

_____

_____

6. What does the membership operator 'in' evaluate to if a search item is missing from a sequence?

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7. What parameters are specified inside the syntax brackets of a range() function?

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8. Explain the behavior of a step value when it is configured with a negative integer.

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Q.5 Answer the following questions.

1. Explain the conceptual working of loops using a real-life playground round-tracking scenario.

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2. List and define the four main components required to establish a functional 'while' loop.

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3. Write a Python program to check whether a specific number entered by the user is present in a list.

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4. Write a Python script using a 'for' loop and range() to display the squares of numbers from 10 to 19.

_____

5. Create a Python program that utilizes the range() function to count downward from 20 to 11.

6. Write the step-by-step logic and Python script required to calculate the factorial of a number.

7. Provide the complete code framework needed to generate and print a Fibonacci series up to a user limit.

8. Construct a Python program using a 'while' loop to generate the multiplication table of a user-input number.