

INDIRA UNIVERSITY, PUNE

SCHOOL OF INFORMATION TECHNOLOGY- BSC AIML

Term End Examination (2025 Pattern) April- May – 2026- Semester – II

Course Name: Introduction to Python Programming
Course Code: 25AML201T

Max. Marks: 25
Time: 1 Hr. 30 Minutes

Instructions:

- All Questions are compulsory.
- Figures to the right indicates full marks.

Q1.	Attempt any 5 out of 7. (1 Mark each) a) How do you access characters in a string? b) What is a set? c) What is a lambda function? d) What is the use of open() function in file handling? e) What is the use of try block? f) How do you create a class in Python? g) What is inheritance?	(5 Marks)	CO1
Q2.	Attempt any 2 out of 4. (5 Marks each) a) Explain various set operations and Apply set operations in Python to create two sets and perform union, intersection, and difference. b) Explain how to read and display the contents of a file in Python. Apply the appropriate file handling functions to illustrate the process with an example. c) Apply the concept of user-defined exceptions to handle invalid input (e.g., marks outside the valid range) and explain why such custom exceptions improve program reliability. d) List any four String functions of Python and develop a Python function that accepts a string and returns the number of vowels in it.	(10 Marks)	CO3
Q.3	Attempt all questions. a) Design and develop a class Student with attributes and methods and create objects to display student details. b) Design a Python program that generates pattern:- 1 1 2 1 2 3 1 2 3 4	(10 Marks)	CO6
Q.3	OR Design and develop a method using list comprehension to create a new list containing squares of each number from an existing list of numbers. Explain the concept of list comprehension in detail.		CO6
