Graphic Era HILL UNIVERSITY
Established by an Act of the State Legislature of Uttarakhand (Adhiniyam Sankhya 12 of 2011)
University under section 2(f) of UGC Act, 1956

Term Evaluation Theory (Odd)-(Late/Lateral Admission) Exam Nov. 2025

Roll no.....

Name of the Course: BCA (AI&DS)/(CS&CL)
Semester: I
Name of the Paper: Fundamentals of python programming
Paper Code: TBD-102/TBL-102
Time: 1.5 hour **Maximum Marks: 50**

Note:
(i) Answer all the questions by choosing any one of the sub-questions
(ii) Each question carries 10 marks.

Q1. (10 Marks)CO1

a. Describe the key characteristics and advantages of Python programming. How does it differ from traditional programming languages?

OR

b. Write short notes on-
(i) Variables in Python
(ii) Type Conversion Functions
(iii) Input and Output Functions
(iv) Python Tokens

Q2. (10 Marks)CO1

a. What are Python's built-in data types? Explain mutable and immutable data types with examples.

OR

b. What is a list in Python? Explain list indexing and slicing with suitable examples.

Q3. (10 Marks)CO1

a. Write a Python program to calculate the total marks, average, and grade of a student based on the following criteria-
1. If the average is 90 or above assign Grade A
2. If average is between 75–89 assign Grade B
3. Otherwise assign Grade C

OR

b. Differentiate between *for* and *while* loops in Python. Write a Python program using a *while* loop to print the first 10 natural numbers and their squares.

Q4. (10 Marks)CO2

a. Discuss five important methods used for performing string operations in Python. Illustrate the use of each method with an example.

OR

b. Write a Python program that takes n elements in a list and finds the maximum, minimum, and averag of the list.

Q5. (10 Marks)CO2

a. What are functions? Explain different types of arguments used in Python functions with examples.

OR

b. What are lambda functions? Write a Python program using a lambda function to calculate the square and cube of a number.