

B.SC(IT) SEMESTER - 5 (NEP-2020) Examination**Oct/Nov - 2025****Programming in Python (Minor-5)****Time: 2:00 Hours****Marks:50****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Que.1 Answer following Questions. (Any Two) (10)
- 1) Explain Python IDLE? Explain its components and how to use it.
 - 2) Describe types of operators in Python with suitable example.
 - 3) Explain Python Modules with example.
 - 4) Write short note on Python Looping Statements.
- Que.2 Answer following Questions. (Any Two) (10)
- 1) Explain how to open, read, write and close the file with example.
 - 2) Explain String Slicing and String methods with example.
 - 3) What are Sets & Dictionary in Python?
 - 4) Write a Python program to read a CSV file and display its contents in tabular form.
- Que.3 Answer following Questions. (Any Two) (10)
- 1) What is the purpose of using multiple except blocks? Give an example.
 - 2) What is an assertion in Python? How is it used in debugging? Give an example.
 - 3) Explain encapsulation with an example. Explain private members of class
 - 4) Explain insertion sort and Quick sort.
- Que.4 Answer following Questions. (Any Two) (10)
- 1) Write a Python program using OpenCV to read and display an image, then save a resized version.
 - 2) Explain plot(), scatter(), xlabel(), and show() functions with a sample output.
 - 3) Demonstrate the use of LabelFrame and messagebox.showinfo() in a Tkinter application.
 - 4) Explain Pandas functions with example
- Que.5 Answer following Questions (Any Two) (10)
- 1) Explain function arguments with example Write a user defined function to find out factorial.
 - 2) Explain the use of re.findall(), re.search(), and re.sub() functions with examples.
 - 3) Explain linear and binary search algorithm.
 - 4) How do you read a CSV file using Pandas? Demonstrate using read_csv(), head(), and describe().
