Reg. No. | | | | | | | | | | | |

BCACACN 401

Fourth Semester B.C.A. Degree Examination, June/July 2025
(NEP 2020) (2022 – 23 Batch Onwards)
PYTHON PROGRAMMING

Time : 2 Hours Max. Marks : 60

Note : *Answer **any six** questions from Part – **A** and **One full** question from **each** Unit of Part – **B**.*

PART – A **(6×2=12)**

1. a) How to determine the data type of a variable ? Give the syntax and example.
   b) What is indentation ? Why it is required ?
   c) Why strings are called immutable ?
   d) What is tuple ? How it is created in python ?
   e) List any two file object attributes and mention its purpose.
   f) What is root window ? How it is created in Python ?
   g) How to connect to the SQLite database ? Give example.
   h) What is Padas Series ? Give example.

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PART – B

Unit – I

2. a) Explain any four features of Python.
   b) Explain use of string.format and f-string with print() function.
   c) Explain various data types in Python. **(4+4+4)**

3. a) Explain any four flavors of Python.
   b) Explain 'while' and 'for' loops with syntax and example.
   c) Explain Exception handling in Python with try...except... finally block. **(4+4+4)**

Unit – II

4. a) What is string slicing ? Explain with examples.
   b) Explain split and join methods of string with example.
   c) Explain any five dictionary methods with syntax. **(4+4+4)**

5. a) Explain concatenation, repetition and membership operations on string.
   b) Write a note on indexing and slicing of lists.
   c) Explain any four set methods. **(4+4+4)**

Unit – III

6. a) List and explain various file opening modes with examples.
   b) What is inheritance ? How to implement inheritance in Python ? Give an example.
   c) Explain declaring a class, defining an object and constructor with syntax and example. **(4+4+4)**

7. a) Explain multi-level inheritance with example.
   b) Explain method overloading and overriding with example.
   c) Write a note on :
      i) Text Widget
      ii) Entry Widget. **(4+4+4)**

Unit – IV

8. a) Explain any four SQLite database operations with example.
   b) Explain any five NumPy array attributes with syntax.
   c) Explain Bar Graph creation using Matplot Library module. **(4+4+4)**

9. a) Explain basic arithmetic operations on NumPy array with examples.
   b) Explain any four operations on dataframe with example.
   c) Write a program to display histogram. **(4+4+4)**