Roll No. | | | | | | | | | | | | **Total No. of Pages : 02**

Total No. of Questions : 09

MCA (Sem.–1)

PROGRAMMING IN PYTHON

Subject Code : PGCA-1951

M. Code : 79036

Date of Examination : 16-12-2023

Time : 3 Hrs. **Max. Marks : 70**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION - B & C. have FOUR questions each.**
3. **Attempt any FIVE questions from SECTION B & C carrying TEN marks each.**
4. **Select atleast TWO questions from SECTION - B & C.**

SECTION-A

1. Write short notes on :

a) What is Python's main design philosophy?

b) How do you declare a variable in Python?

c) What is the purpose of the print() function in Python?

d) How can you comment a single line in Python?

e) What does the len() function do in Python?

f) How do you create a list in Python?

g) What does a Python set data structure contain?

h) How do you define a function in Python?

i) What is a module in Python?

j) How do you handle an exception in Python?

SECTION-B

2. What is the purpose of an indentation in Python code, and how is it different from other languages?

3. What are data types in Python and can you provide examples of each?

4. Describe the use of list, set and dictionary comprehensions in Python.

5. Write a program that finds the largest element in a list of numbers without using built- in functions like max().

SECTION C

6. Discuss the concept of Object-Oriented Programming (OOP) in Python. How can you create and manipulate classes and objects in Python?

7. Write a Python program to find the factorial of a number using a recursive function.

8. Create a Python class representing a basic calculator with methods for addition, subtraction, multiplication and division.

9. Develop a Python script that calculates the area of various geometric shapes (e.g., circle, rectangle, triangle) based on user input.

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.