

PGD.C.S.A. Sem.2 Examination
Object Oriented Programming using Python
June-2025

Date : 24/6/2025, Tuesday
Time : 3-00 Hours]

[Max. Marks : 50

Instructions:

- Write both the Sections in the separate answer book.
- Both Sections having equal weightage.
- Draw Diagrams wherever necessary.
- Make Assumptions wherever necessary.

SECTION – I

- Q-1 Explain the following: 09**
1. Explain the difference between variables and expressions in Python with suitable examples.
 2. What are conditional statements? Write a simple Python program using if-else.
 3. Describe two types of loops in Python. Write syntax examples for both.

- Q-2 Attempt the following: 08**
1. Write a Python program to calculate the area of a circle using a user-defined function.
 2. Write a short note about mathematical functions used in Python.

OR

- Q-2 Attempt the following:**
1. List down basic data types used in Python. Also brief about each datatype.
 2. Explain the concept of recursion in Python with an example to calculate factorial.
- Q-3 Attempt the following: 08**
1. What is inheritance in Python? Write a simple example demonstrating single inheritance.
 2. Write a note on getter and setter methods.

OR

- Q-3 Attempt the following.**
1. What is the use of break and continue statements? Explain with an example.

(P.T.O)

2. How return statement is working with functions in Python, also discuss how it is different from return statement used in C language.

SECTION – II

- Q-4 Explain the following Terms with an appropriate example. 09**
1. String Slicing
 2. Dictionaries
 3. Set

- Q-5 Attempt the following: 08**
1. Write a Python program to find all prime numbers less than 50 using a list.
 2. Define multiple inheritance and discuss problem with multiple inheritance. Explain MRO.

OR

- Q-5 Attempt the following:**
1. Write a short note on List methods.
 2. What is the difference between list and tuple. Give an example for the same.

- Q-6 Write a short note on following. (Any Two) 08**
1. Abstract Methods
 2. Features of Object oriented in Python
 3. Lambda expression.
