



**PRESTIGE INSTITUTE OF ENGINEERING,  
MANAGEMENT AND RESEARCH, INDORE**

Approved by AICTE New Delhi, DTE Govt. of MP Bhopal and Affiliated to Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal M.P.

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**Department of Computer Science & Engineering (Accredited by NBA)**

# **LABORATORY MANUAL**

## **PYTHON**

### **CS – 506**

#### **V Semester**

**Prestige Institute of Engineering**

**Management and Research**



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# **DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING CERTIFICATE**

This is to certify that Mr./Ms. \_\_\_\_\_ with RGPV enrolment no. \_\_\_\_\_ has satisfactorily completed the course of experiments in **Programming in python laboratory**, as prescribed by **Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal** for **V Semester** of the **Computer Science and Engineering Department** during year **202 -202 .**

**Signature of Faculty**

## INDEX

Expt. No	Name of Experiment	Date of Conduction	Signature
1	Write a Python program to find the GCD of two numbers.		
2	Write a Python program to find the square root using Newton's Method.		
3	Write a Python program for exponentiation of a number.		
4	Write a Python program to find the maximum from a list of numbers.		
5	Write a Python program to perform Linear Search.		
6	Write a Python program to perform Binary Search.		
7	Write a Python program to perform Selection Sort.		
8	Write a Python program to perform Insertion Sort.		
9	Write a Python program to perform Merge Sort.		
10	Write a Python program to print the first N prime numbers.		
11	Write a Python program to multiply two matrices.		
12	Write a Python program to use command line arguments.		
13	Write a Python program to find the most frequent words in a text file.		
14	Write a Python program to simulate elliptical orbits using Pygame.		
15	Write a Python program to create a bouncing ball using Pygame.		
16	Write a program to perform rock paper scissor game		
17	Write a program to create a pyramid, box and cross pattern 		
18	Write a Python program that takes an integer $k$ from the user and reverse the given list at position $k$ .		

19	Write a Python program to right-rotate an array by $k$ positions by repeatedly shifting the last element to the front.		
20	Write a program to perform lambda, * args and ** args function in python		
21	Write a Python program to perform Quick Sort.		
22	<p>Write a Python program to develop a simple hotel ordering system.  The program should display a menu card with item codes, item names, and prices.  The user will enter:</p> <ul style="list-style-type: none"> <li>• An item code, and</li> <li>• The quantity required.</li> </ul> <p>You must calculate and display:</p> <ul style="list-style-type: none"> <li>• The item name,</li> <li>• The quantity, and</li> <li>• The total bill amount.</li> </ul> <p>Instead of using multiple if-elif statements to match item codes,</p>		
23	Write a Python program that checks if a given input string can be rearranged to form a palindrome (an anagram of a palindrome)		
24	Develop a Python program using Object-Oriented Programming (OOP) principles to simulate a basic bank account system. The system must include a base class (Bank) for general account operations and a specialized class (Saving_Account) that demonstrates Inheritance and Polymorphism by adding specific features like interest calculation.		
25	Implementation of Library and Student Management System Using Python Classes and Objects		
26	Write a program to implement Stack using class Stack		
27	Write a program to implement Queue using class Queue		
28	Write a program to implement Linked List		