

BHARATHIAR UNIVERSITY: COIMBATORE 641046
CERTIFICATE IN PYTHON PROGRAMMING
(For the CCII students admitted from the academic year 2016-17 onwards)

SCHEME OF EXAMINATION

PAPER	TOTAL MARKS	DURATION
PAPER – I THEORY EXAMINATION (60 – Objective type of questions only)	100	2 HOURS
PAPER – II PRACTICAL EXAMINATION	100	2 HOURS
PAPER – III PROJECT ACTIVITY (One – project submission only)	100	-
TOTAL	300	-

Applicable to Students in Class 10 and above

PAPER I

Unit I

Introduction to Python: Overview – History of Python – Python features – **Environment** - Environment setup – Getting Python – Install Python – Setting up Path – Running Python – **Basic Syntax** – Hello World – Interactive mode programming – Script mode Programming – A simple Python example.

Unit II

Programming Basics of Python: Python Keywords –Identifiers – Rules for writing Identifiers – Reserved words – Lines and Indentation – Multiline statements – Python Variable – Variable Assignment – Multiple Assignment - **Standard Data Types:** Numbers: int, float and decimal – **Basic Operators:** Arithmetic Operators – Comparison (Relational) Operators – Assignment Operators – Logical Operators – Bitwise Operators – Membership Operators – Identity Operators – **Loops:** Types of loops – while – for Loops – **Control statements:** if ...else – for loop – break and continue.

Unit III

Programming with Python: Functions: Introduction – Using a Function - Communicating with Functions – Example of creating a simple calculator using functions – **Lists:** Accessing values in Lists – Updating Lists – Delete List elements – Built-in Lists functions & Methods – **Tuples:** Creating Tuples – Accessing Tuples –Updating Tuples – Deleting Tuples – Basic Tuple operations - Built-in Tuple functions – **Dictionary:** Access, Update and Delete dictionary elements– Built-in Dictionary Functions & Methods.

Unit IV

Object Oriented Programming: Classes and Objects: Creating a Class – Using a Class – A simple Inheritance – Multiple Inheritance – **Exception Handling:** Try, Except and Finally

Unit V

Advanced Concepts: Files I/O: Opening a file – Seek and Find a file – Other I/O functions - **Database and SQL:** Database – Transactions – What is SQLDB? – Database connection Parameters – Insert, Update, Delete – **Sending Mail:** SMTP protocol – Syntax – Sending Email using Python.

Reference

Python Programming – Dr. R. Ravichandran, M.Sc., M.Phil., Ph.D.,
Mr. K.Thambi Prabhakaran, B.Tech., ME.,
Mr. M. Nanda Kumar. BE.,










PAPER II – Practical – PYTHON PROGRAMMING

1. Write the Python code to Print Hello World.
2. Write the Python code for Adding Two Numbers.
3. Write the Python code to find the Area of Triangle.
4. Write the Python code to check the leap year.
5. Write the Python code to find the ASCII key value of the characters.
6. Write the Python code to Convert Decimal to Binary.
7. Write the Python code to check whether the given number is Odd or Even.
8. Write the Python code to Addition of Two Matrix.
9. Write the Python code to make simple Calculators.
10. Write the Python code to check whether the given number is Palindrome number or Not.

GUIDELINES FOR PROJECT ACTIVITY

Students shall be formed in groups. Out of 10 programs given, students are expected to solve any 5 programs, by choosing at least 2 programs from Question nos. 1 to 5 and 3 programs from Question nos. 6 to 10.

Following shall be featured in the project report:

-  Objective of the Project
-  Algorithm
-  Flowchart
-  Software / Hardware requirements
-  Source Code
-  Input & Output
-  Result
-  Reference
-  Scope for further study

Project report shall be submitted with proper design and layout.

Paper III - Project

Project Questions:

1. Write the Python code to find the Area of Rectangle and Circle.
2. Write the Python code to find the Square root of a number.
3. Write the Python code to find the Fibonacci Series.
4. Write the Python code to check whether the given number is Positive or negative.
5. Write the Python code to find the largest of three nos.
6. Write the Python code to Display the Calendar.
7. Write the Python code to Multiplication of Two Matrix.
8. Write the Python code to check whether the given number is Armstrong or Not.
9. Write the Python code to Swap Two Variables.
10. Write the Python code to convert Kilo-meter to Miles and Celsius to Fahrenheit.