

COREPAPER
FIRST YEAR - SEMESTER-I

Subject Code	Subject Name	Category	L	T	P	S	Credits	Marks		
								CIA	External	Total
23BCA1C1	PYTHON PROGRAMMING	Core I	5	-	-	-	5	25	75	100
Course Objective										
CO1	To make students understand the concepts of Python programming.									
CO2	To apply the OOPs concept in PYTHON programming.									
CO3	To impart knowledge on demand and supply concepts									
CO4	To make the students learn best practices in PYTHON programming									
CO5	To know the costs and profit maximization									
	Contents									No. of Hours
UNIT I	Basics of Python Programming: History of Python - Features of Python -Literal - Constants - Variables - Identifiers - Keywords - Built-in Data Types -Output Statements - Input Statements - Comments - Indentation - Operators - Expressions - Type conversions. Python Arrays: Defining and Processing Arrays - Array methods.									15
UNIT II	Control Statements: Selection/Conditional Branching statements: if, if-else, nested if and if-elif-else statements. Iterative Statements: while loop, for loop, else suite in loop and nested loops. Jump Statements: break, continue and pass statements.									15
UNIT III	Functions: Function Definition - Function Call - Variable Scope and its Lifetime - Return Statement. Function Arguments: Required Arguments, Keyword Arguments, Default Arguments and Variable Length Arguments -Recursion. Python Strings: String operations - Immutable Strings - Built-in String Methods and Functions - String Comparison. Modules: import statement - The Python module - dir() function – Modules and Name space - Defining our own modules.									15
UNIT IV	Lists: Creating a list-Access value in List-Updating values in Lists-Nested lists-Basic list operations-List Methods. Tuples: Creating, Accessing, Updating and Deleting Elements in a tuple–Nested tuples–Difference between lists and tuples. Dictionaries: Creating, Accessing, Updating and Deleting Elements in a Dictionary–Dictionary Functions And Methods-Difference between Lists and Dictionaries.									15
UNIT V	Python File Handling: Types of files in Python-Opening and Closing files-Reading and Writing files: write() and writelines() methods- append() method–read() and readlines() methods–with keyword–Splitting words –File methods-File Positions-Renaming and deleting files.									15
	Total Hours									75

Course Outcomes		Programme Outcomes
CO	On completion of this course, students will	
CO1	Learn the basics of python, Do simple programs on python, Learn how to use an array.	PO1, PO2, PO3, PO4, PO5, PO6
CO2	Develop program using selection statement, Work with Looping and jump statements, Do programs on Loops and jump statements.	PO1, PO2, PO3, PO4, PO5, PO6
CO3	Concept of function, function arguments, Implementing the concept strings in various application, Significance of Modules, Work with functions, Strings and modules.	PO1, PO2, PO3, PO4, PO5, PO6
CO4	Work with List, tuples and dictionary; Write program using list, Tuples and dictionary.	PO1, PO2, PO3, PO4, PO5, PO6
CO5	Usage of File handlings in python, Concept of reading and writing files, Do programs using files.	PO1, PO2, PO3, PO4, PO5, PO6

Textbooks

1	ReemaThareja,PythonProgrammingusingproblemsolvingapproach,FirstEdition, 2017,Oxford UniversityPress.
2	Dr.R.NageswaraRao,CorePythonProgramming,FirstEdition,2017,Dreamtech Publishers.

ReferenceBooks

1	VamsiKurama,-PythonProgramming:AModernApproach,PearsonEducation.
2	MarkLutz,LearningPython,Orielly.
3	AdamStewarts,PythonProgramming,Online.
4	FabioNelli,PythonDataAnalytics,APress.
5	Kenneth A.Lambert,Fundamentals of Python–First Programs,CENGAGE Publication.

WebResources

1	https://www.programiz.com/python-programming
2	https://www.guru99.com/python-tutorials.html
3	https://www.w3schools.com/python/python_intro.asp
4	https://www.geeksforgeeks.org/python-programming-language/
5	https://en.wikipedia.org/wiki/Python_(programming_language)

Mapping with Programme Outcomes:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	3	2	2	3	3	3
CO2	3	2	2	3	2	3
CO3	3	2	2	3	2	2
CO4	3	2	2	3	2	3
CO5	3	2	2	3	3	3
Weightage of course contributed to each PSO	15	10	10	15	13	14

S-Strong-3 M-Medium-2 L-Low-1