Semester-III

Course Code	Course Name	Course Type	Cd	L	T	P	Marks		
							Internal	Final Exam	Total
BCAMJ-301	Introduction to Python Programming	Major	4	4	0	0	40	60	100

Course Outcomes

At the end of the course the student will be able to	
CO1	Describe the basic data types in Python.
CO2	Demonstrate the use of control statements.
CO3	Analyze the string, sequence types methods for managing the data.
CO4	Develop functions for modular programming.
CO5	Apply object-oriented programming principles and file operations in Python.

Detailed Syllabus
Section-A

Unit 1: Introduction to Python Programming Language: Features of Python, Command Line mode and Python IDEs, Identifiers, Keywords, Statements and Expressions, Variables, Operators, Data Types, Indentation and Comments.
(10 Hrs)
Unit 2: Control Statements in Python: Logical Operators, If condition Statement, While Loop, For loop, nested loops, else statement break, continue and Pass statements, Exception handling: catching and raising exceptions, else statement in exceptions, finally block, User defined exceptions.
(10 Hrs)
Unit 3: String and Sequence Types: String Properties, String indexing and splicing, String operators Membership, Built in functions.
Sequence Types: Lists, List type built in methods, Sets: built in methods, operations, Tuples, Special features of Tuples Tuple operators, Dictionary built in methods and its functions.
(10 Hrs)

Section-B
Unit 4: **Functions and Modules:** Introduction, Built in Functions, User Define Functions, Function Definition, Calling of a function, Function Arguments, Recursive functions and return statement.
Modules: The maim module**,** Multiple modules, Importing a module
(10 Hrs)
Unit 5: Oops Concept & File Handling: Python Oops Concept, Classes in Python, Creating Classes and Objects, Object initialization, Python Constructor, Types of constructors, Constructor overloading , Classes and functions, Inheritance, and Polymorphism.
File Handling: Introduction, Reading a file, writing the file, creating a new file, File methods.
(10 Hrs)

Textbooks

S. No.	Name of the Books	Author	Publisher	Edition (Pub. Yr.)
1	Think Python	Allen B. Downey	O'Reilly	3rd (2024)

Reference Books

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