VASAVI COLLEGE OF ENGINEERING (Autonomous)
IBRAHIMBAGH, HYDERBAD-500031,
DEPARTMENT OF INFORMATION TECHNOLOGY

FUNDAMENTLAS OF PYTHON PROGRAMMING
(GENERAL POOL STREAM: OPEN ELECTIVE-I)
(Common for CIVIL, ECE, EEE & MECH)
SYLLABUS FOR B.E. III SEMESTER

L:T:P(Hrs./week):2:0:0	SEE Marks :60	Course Code:**U22PC310IT**
Credits : 2	CIE Marks :40	Duration of SEE : 3 Hours

Course Objectives	Course Outcomes
The Objectives of the course:	On completion of the course, students will be able to
Acquire problem solving skills for writing python scripts	1. Understand the fundamentals of python and implement control structures. 2. Understand basic knowledge on strings,lists and tuples. 3. Implement programs using dictionaries, and sets. 4. Implement OOP concepts in python.

UNIT – I:
Basics of Python Programming: Features of Python, variables and identifiers, operators and expressions.
Decision control statements: Selection/Conditional branching statements,basic loop structures/iterative statements, nested loops, break, continue and pass statements.
Functions: Definition, function call, more on defining functions, recursive functions.

Unit – II:
Strings: Introduction, accessing strings, basic operations, string slice, String function and methods, Regular Expressions,introduction to lists.
Tuples: Introduction, operations on tuples, packing and unpacking, nested tuples, tuple methods and functions.

UNIT – III:
Set: Introduction, Set operations.
Dictionaries: Basic operations, sorting items, looping over dictionary, nested dictionaries, built-in dictionary functions.

UNIT – IV:
OOPS Concepts: Introduction, classes and object, class method and self-argument, the __init__()method, class variables and object variables, public and private data members, Inheritance, Operator Overloading.
Files: Reading and writing files.

Learning Resources:
1 Allen Downey, "Think Python: How to Think Like a Computer Scientist", O'Reilly publications,2nd Edition.
2.Reema Thareja, "Python programming using problem solving approach ", Oxford university press.
3. Mark J Guzdial, Introduction to Computing and programming in Python, 3rd Edition (2013), Pearson India
4. https://onlinecourses-archive.nptel.ac.in/noc19_cs09/
5. http://nptel.ac.in/courses/117106113/34
6. https://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-01sc-introduction-to-electricalengineering-and-computer-science-i-spring-2011/python-tutorial/

The break-up of CIE: Internal Tests+ Assignments + Quizzes

1	No. of Internal Tests:	02	Max.Marks for each Internal Tests:	30
2	No. of Assignments:	02	Max. Marks for each Assignment:	05
3	No. of Quizzes:	02	Max. Marks for each Quiz Test:	05

Duration of Internal Test: **90 Minutes**