PYTHON APPLICATION PROGRAMMING
[As per Choice Based Credit System (CBCS) scheme]
(Effective from the academic year 2016 -2017)
SEMESTER – VI

Subject Code	15CS664	IA Marks	20
Number of Lecture Hours/Week	3	Exam Marks	80
Total Number of Lecture Hours	40	Exam Hours	03

CREDITS – 03

Course objectives: This course will enable students to

- Learn Syntax and Semantics and create Functions in Python.
- Handle Strings and Files in Python.
- Understand Lists, Dictionaries and Regular expressions in Python.
- Implement Object Oriented Programming concepts in Python
- Build Web Services and introduction to Network and Database Programmingin Python.

Module – 1	Teaching Hours
Why should you learn to write programs, Variables, expressions and statements, Conditional execution, Functions	8 Hours
Module – 2	
Iteration, Strings, Files	8 Hours
Module – 3	
Lists, Dictionaries, Tuples, Regular Expressions	8 Hours
Module – 4	
Classes and objects, Classes and functions, Classes and methods	8 Hours
Module – 5	
Networked programs, Using Web Services, Using databases and SQL	8 Hours

Course outcomes: The students should be able to:

- Examine Python syntax and semantics and be fluent in the use of Python flow control and functions.
- Demonstrate proficiency in handling Strings and File Systems.
- Create, run and manipulate Python Programs using core data structures like Lists, Dictionaries and use Regular Expressions.
- Interpret the concepts of Object-Oriented Programming as used in Python.
- Implement exemplary applications related to Network Programming, Web Services and Databases in Python.

Question paper pattern:

The question paper will have TEN questions.

There will be TWO questions from each module.

Each question will have questions covering all the topics under a module.

The students will have to answer FIVE full questions, selecting ONE full question from each module.

Text Books:

1. Charles R. Severance, "Python for Everybody: Exploring Data Using Python 3", 1st Edition, CreateSpace Independent Publishing Platform, 2016. (http://do1.dr-chuck.com/pythonlearn/EN_us/pythonlearn.pdf) (Chapters 1 – 13, 15)
2. Allen B. Downey, "Think Python: How to Think Like a Computer Scientist", 2nd Edition, Green Tea Press, 2015.

(http://greenteapress.com/thinkpython2/thinkpython2.pdf) (Chapters 15, 16, 17) (Download pdf files from the above links)
Reference Books: 1. Charles Dierbach, "Introduction to Computer Science Using Python", 1st Edition, Wiley India Pvt Ltd. ISBN-13: 978-8126556014   2. Mark Lutz, "Programming Python", 4th Edition, O'Reilly Media, 2011.ISBN-13: 978-9350232873   3. Wesley J Chun, "Core Python Applications Programming", 3rd Edition,Pearson Education India, 2015. ISBN-13: 978-9332555365   4. Roberto Tamassia, Michael H Goldwasser, Michael T Goodrich, "Data Structures and Algorithms in Python",1stEdition, Wiley India Pvt Ltd, 2016. ISBN-13: 978-8126562176   5. Reema Thareja, "Python Programming using problem solving approach", Oxford university press, 2017

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