Course Code: 16CS543 **R16**

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (DESCRIPTIVE)

Subject with Code: Python Programming (16CS543) **Course & Branch**: B.Tech - CSE

Year & Sem: IV-B.Tech & II-Sem **Regulation:** R16

UNIT –I
INTRODUCTION

1	Create python program for the following i) To calculate the simple interest and compound interest. ii) To perform string concatenation.	[L6]CO1]	[12M]
2	a) Illustrate the history of Python.	[L3][CO1]	[6M]
	b) List out the features and applications of Python.	[L1][CO1]	[6M]
3	a) Create a Python program to display Fibonacci series.	[L6][CO1]	[6M]
	b) Recall the Indentation with suitable example.	[L1][CO1]	[6M]
4	a) Explain variable assignment with suitable example.	[L3][CO1]	[6M]
	b) What is data type? List out the data types with example.	[L1][CO1]	[6M]
5	Elucidate the string and its methods with example.	[L2][CO1]	[12M]
6	Discriminate about the Multi-Valued Data types with example.	[L4][CO1]	[12M]
7	a) Write a Python program to find maximum among three numbers.	[L2][CO1]	[6M]
	b) Develop a Python program to Swapping of two numbers with and without using temporary variable.	[L3][CO1]	[6M]
8	a) What is an expression in Python? Explain order of evaluation with example.	[L1][CO1]	[6M]
	b) Implement the python program to calculate total and average marks based on input.	[L3][CO1]	[6M]
9	a) Define Variable and mention rules for choosing names of Variable.	[L1][CO1]	[6M]
	b) Create a python program to generate the multiplication table based on user input.	[L6][CO1]	[6M]
10	Create python program for the following i) Prime number or not ii) Odd or even	[L6][CO1]	[12M]

UNIT –II
OPERATORS AND EXPRESSIONS & DATA STRUCTURES

1	Classify various types of operators in Python and write any 4 types of operators.	[L4][CO2]	[12M]

2	a) Summarize Control flow structures in python with example.	[L5][CO2]	[6M]
	b) What is Set? List out the Set Operations in detail.	[L2][CO2]	[6M]
3	a) Express function to do all arithmetic operators with example.	[L3][CO2]	[6M]
	b) Write a program to demonstrate operation of tuples.	[L6][CO2]	[6M]
4	a) Describe in about the Single-Valued data types in python with example.	[L2][CO2]	[6M]
	b) Describe Python jump statements with examples.	[L2][CO2]	[6M]
5	Explain Arithmetic operations (Addition, Subtraction, Multiplication, and Division) on integers. Input the two integer values and operator for performing arithmetic operation through keyboard.	[L3][CO2]	[12M]
6	a) Describe the string in slicing with example.	[L4][CO2]	[6M]
	b) Write a Python program to modify an item in the Dictionary.	[L3][CO2]	[6M]
7	a) Explain the Logical and Bitwise operator with example.	[L2][CO2]	[6M]
	b) What are formal and actual arguments explain with example?	[L1][CO2]	[6M]
8	a) Describe the list and its methods with example.	[L4][CO2]	[6M]
	b) What is dictionary? Explain the methods available in dictionary.	[L1][CO2]	[6M]
9	a) Write a Python program to find sum of natural numbers.	[L3][CO2]	[6M]
	b) Discuss the assignment and bitwise operators supported in Python.	[L2][CO2]	[6M]
10	a) Discuss the Membership and Identity operators with example.	[L2][CO2]	[6M]
	b) Create a Python program to print prime number series up to N.	[L6][CO2]	[6M]

UNIT –III
CONTROL FLOW, FUNCTIONS AND MODULES

1	a) Explain break and continue statement with the help of for loop with an example.	[L2][CO3]	[6M]
	b) What are the different loop control statements available in Python? Explain with suitable examples.	[L1][CO3]	[6M]
2	a) Create recursive function to find factorial of a number	[L6][CO3]	[6M]
	b) Illustrate lambda function with example.	[L4][CO3]	[6M]
3	a) Discuss about keyword arguments with example.	[L2][CO3]	[6M]
	b) Distinguish global and local variables with example.	[L4][CO3]	[6M]
4	a) Define Variable-length arguments? Explain with example.	[L1][CO3]	[6M]
	b) Narrate scope of a variable in a function.	[L3][CO3]	[6M]
5	a) Illustrate about default arguments with example.	[L4][CO3]	[6M]
	b) Write a function to return right most digit in the entered number	[L3][CO3]	[6M]
6	a) Describe about name spacing.	[L2][CO3]	[6M]
	b) Describe Python jump statements with examples.	[L2][CO3]	[6M]
7	Examine the syntax of the following statements with example i) for loop ii) while loop iii) Nested for Loops	[L3][CO3]	 [4M] [4M] [4M]
8	a) Explain about the import statement in modules.	[L2][CO3]	[6M]
	b) Illustrate about how to creating new module in python.	[L4][CO3]	[6M]
9	What is module? How to create a module explain with an example.	[L3][CO3]	[12M]
10	a) Summarize the ways of passing function arguments with example.	[L5][CO3]	[6M]
	b) Write a small code using try-except-else-finally statement in python.	[L3][CO3]	[6M]

Course Code: 16CS543 **R16**

UNIT –IV

PYTHON PACKAGES AND OBJECT ORIENTED PROGRAMMING IN PYTHON

1	What is inheritance? Illustrate types of inheritance with python code.	[L2][CO4]	[12M]
2	a) Compare method overloading and overriding.	[L2][CO4]	[6M]
	b) Describe about class constructor (_init_()) with example.	[L3][CO4]	[6M]
3	a) What are packages? Give an example of package creation in Python.	[L3][CO4]	[6M]
	b) Create code to illustrate try and except statements in Python.	[L6][CO4]	[6M]
4	Summarize the different types of Exceptions in Python.	[L5][CO4]	[12M]
5	a)What is an Raising Exception with an example?	[L1][CO4]	[6M]
	b) Elaborate User defined Exception with an example.	[L1][CO4]	[6M]
6	Describe about Handling Exceptions in detail with examples.	[L2][CO4]	[12M]
7	a) Illustrate searching with example program.	[L4][CO4]	[6M]
	b) Illustrate matching with example program.	[L4][CO4]	[6M]
8	Define PIP. Discuss package installation via pip.	[L2][CO4]	[12M]
9	a) Describe the types of variables inside class in OOP.	[L1][CO4]	[6M]
	b) Write about self-variable with Constructor with example.	[L3][CO4]	[6M]
10	a) Illustrate the Reference Counting and Garbage Collection.	[L1][CO4]	[6M]
	b) Comparison between Built-in type and Sequence types in OOP in python.	[L2][CO4]	[6M]

UNIT –V

BRIEF TOUR OF THE STANDARD LIBRARY AND TESTING

1	Describe in detail about operating system interface with an example.	[L2][CO5]	[12M]
2	a) Discuss about Internet access in python.	[L3][CO5]	[6M]
	b) Discuss about Multi-Threading with suitable example.	[L3][CO5]	[6M]
3	Explain in detail about string pattern matching with examples.	[L2][CO5]	[12M]
4	Demonstrate about the GUI programming in Python a) Triangle b) Rectangle	[L3][CO5]	[12M]
5	a) Illustrate about Python Runtime Services.	[L4][CO5]	[6M]
	b) Illustrate about Command line arguments.	[L4][CO5]	[6M]
6	Express about Mathematics functions in python.	[L6][CO5]	[12M]
7	a) Explain about the Unit testing Python in detail.	[L3][CO5]	[6M]
	b) Explain about Data Compression with suitable example.	[L3][CO5]	[6M]
8	a) Write about the writing files in python.	[L1][CO5]	[6M]
	b) Draw Circle in Python using Turtle	[L4][CO5]	[6M]
9	Explain about Functional Programming.	[L4][CO5]	[12M]
10	a) Write about Dates and Times.	[L3][CO5]	[6M]
	b) List out the testing requirement in python.	[L1][CO5]	[6M]

Prepared by:
Dr.J.Manikandan,Professor,CSE,SIETK
Dr.Tamilselvan,Professor,CSE,SIETK