SIDDHARTH GROUP OF INSTITUTIONS::PUTTUR
Siddharth Nagar, Narayanavanam Road – 517583
QUESTION BANK (DESCRIPTIVE)

Subject with Code: PYTHON PROGRAMMING (19CS0501)

Course & Branch: B.Tech – ECE, CSE   **Year & Sem:** I B.Tech & I Sem
Regulation: R19

UNIT – 1

1. a) What is an algorithm? Explain characteristics of an algorithm. [4M]

   b) What are the features and applications of Python? [4+4M]

2. Explain about the input and output statements or methods with example. [6+6M]

3. a) Explain about the Single-Valued data types in python. [6M]

   b) What is Indentation? Explain with example. [6M]

4. a) What is data type? List out the types of data types with example. [6M]

   b) Explain variable assignment with suitable example. [6M]

5. Describe an algorithm for the following [7+5M]

   i) Prime number or not

   ii) Odd or even

6. Define Flowchart and explain symbols used in flowchart with example. [2+10M]

7. Explain briefly about the Multi-Valued Data types with example. [12M]

8. a) Enumerate the list and its methods with example. [6M]

   b) Elucidate the string and its methods with example. [6M]

9. a) What is dictionary? Explain the methods available in dictionary. [6M]

   b) Differentiate between the tuple and sets in python. [6M]

10. a) Define Variable and mention rules for choosing names of Variable. [6M]

    b) Implement the python program to calculate total and average marks based on input.[6M]

<u>UNIT – 2</u>

1. List various types of operators in Python and write any 4 types of operators. [2+10M]

2. Explain in detail about Control flow structures in python. [12M]

3. Outline with an example the assignment and bitwise operators supported in Python. [6+6M]

4. a) Write a Python program to print prime number series up to N. [6M]

   b) Write a Python program to Swapping of two numbers with and without using temporary
   variable. [6M]

5. a) If the age of Ram, Sam, and Khan are input through the keyboard, write a python program

   to determine the eldest and youngest of the three. [6M]

   b) Arithmetic operations (Addition, Subtraction, Multiplication, and Division) on integers. Input
the two integer values and operator for performing arithmetic operation through keyboard.[6M]

6. a) Write a python program to find the given number is odd or even. [6M]

   b) Explain break and continue statement with the help of for loop with an example. [6M]

7. Explain the syntax of the following statements [3+3+3+3M]

        i) for loop

        ii) while loop

        iii) if - else

        iv) if-elif-else

8. Explain expressions in python with order of evaluation with example. [12M]

9. a) Develop a program to find the largest among three numbers. [6M]

   b) Write a python program to find the given year is leap or not. [6M]

10.a) Write a python program to print factorial of a given number [6M]

    b) Implement Python program to find sum of natural numbers. [6M]

<u>UNIT – 3</u>

1. a) Define function? Write its syntax   [3M]
    b) What are formal and actual arguments   [4M]
    c) Write functions to do all arithmetic operations   [5M]

2. a) What is recursive function?   [3M]
    b) Explain lambda function   [4M]
    c) Write recursive function to find factorial of a number   [5M]

3. a) Differentiate key word and default arguments   [6M]

    b) Differentiate global and local variables   [6M]

4. a) Compare class and object with python code   [6M]

    b) Narrate scope of a variable in a function   [6M]

5. a) Write about class constructor(_init_()),self-variable   [5M]

    b) Compare method overloading and overriding   [7M]

6. a) A 4 digit integer is entered through the keyboard. Write a function to
    Calculate the sum of the 4 digit number both without recursion and
    using recursion   [7M]
    b) What are the cons of using functions   [5M]

7. What is inheritance? Illustrate types of inheritance with python code   [12M]

8. a) Write a function to display ASCII Code of entered character   [5M]

    b) Describe how an object is passed as parameter to a method   [7M]

9. a) Write a class with following criteria   [7M]

           Class name: Flower
           Objects: lilly, rose, hibiscus
           Properties: price,color,smell
           Methods: get(), display()
    b) Narrate about polymorphism   [5M]

10. a)Write a function to return right most digit in the entered number   [5M]

    b) How do we achieve code reusability in python? Write a python code to
    Explain code reusability   [7M]

UNIT – 4

1	a	Explain in details about namespaces and scoping.	8M
	b	Explain about the import statement in modules	4M
2	a	What are packages? Give an example of package creation in Python.	5M
	b	Write a small code to illustrate package in Python.	7M
3		What is an Exception? Explain types of exceptions and give an example.	12M
4		How to create user defined exception in python with an example.	12M
5	a	What is module? How many ways to import module in python?	5M
	b	Write a python code to check the given number is prime or not using modules	10M
6	a	What is searching? Explain with example program.	6M
	b	What is matching? Explain with example program.	6M
7	a	List some few common Exception types and explain when they occur	6M
	b	Difference between Raising and User defined exceptions in python?	6M
8	a	Describe any one regular expression with an example?	6M
	b	Explain package installation via PIP	6M
9		Write a syntax for Handling Exceptions with example	12M
	i	try	
	ii	try-except	
	iii	try-except-else	
	iv	try-except-else-finally	
10	a	What are modules in Python?	3M
	b	How to create a module?	3M
	c	What is import statement in modules ?	3M
	d	What is from import statement in modules ?	3M

UNIT – 5

1		Explain in detail about Python Files, its types, functions and operations that can be performed on files with examples.	12M
2	a	Explain about command line arguments	4M
	b	Explain about reading and writing files in python	8M
3	a	Explain about Data Compression	4M
	b	Explain about Dates and Times	8M
4	a	What is mean by Iterators and Generators?	6M
	b	Write about map and filter in Python?	6M
5		Demonstrate about the GUI programming in Python	12M
	i	Circle	
	ii	Triangle	
	iii	Rectangle	
6	a	What is mean by Text File? Explain about reading and writing files in python?	8M
	b	What is turtle with an example?	4M
7		Explain about Functional Programming.	12M
	i	Iterators	
	ii	Generators	
	iii	Maps	
	iv	Filters	
8		Explain about Mathematics function in python	12M
9	a	Explain about Python Runtime Services	8M
	b	Explain about Data Compression	4M

10   a   What is Data Management and Object Persistence   5M

         b   Explain about Dates and Times   7M