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

Subject with Code: PYTHON PROGRAMMING (19CS0501)

Course & Branch: B.Tech – CIVIL,EEE,ME,AGE   **Year & Sem:** I B.Tech & II Sem
Regulation: R19

UNIT – 1

1. a) What is an algorithm? Explain characteristics of an algorithm.   [L1][4M]

  b) What are the features and applications of Python?   [L1][4+4M]

2. Explain about the input and output statements or methods with example.   [L2] [6+6M]

3. a) Explain about the Single-Valued data types in python.   [L2] [6M]

  b) What is Indentation? Explain with example.   [L1] [6M]

4. a) What is data type? List out the types of data types with example.   [L1] [6M]

  b) Explain variable assignment with suitable example.   [L2] [6M]

5. Describe an algorithm for the following   [L3] [7+5M]

      i) Prime number or not

      ii) Odd or even

6. Define Flowchart and explain symbols used in flowchart with example.   [L1] [2+10M]

7. Explain briefly about the Multi-Valued Data types with example.   [L2] [12M]

8. a) Enumerate the list and its methods with example.   [L2] [6M]

  b) Elucidate the string and its methods with example.   [L2] [6M]

9. a) What is dictionary? Explain the methods available in dictionary.   [L1] [6M]

  b) Differentiate between the tuple and sets in python.   [L2] [6M]

10. a) Define Variable and mention rules for choosing names of Variable.   [L5] [6M]

  b) Implement the python program to calculate total and average marks based on input.[L5] [6M]

UNIT – 2

1. List various types of operators in Python and write any 4 types of operators.   [L1] [12M]

2. Explain in detail about Control flow structures in python.   [l2] [12M]

3. Outline with an example the assignment and bitwise operators supported in Python. [L2] [6+6M]

4. a) Write a Python program to print prime number series up to N.   [L3] [6M]

   b) Write a Python program to Swapping of two numbers with and without using temporary
    variable.   [L3] [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.   [L3] [6M]

   b) Arithmetic operations (Addition, Subtraction, Multiplication, and Division) on integers. Input the
two integer values and operator for performing arithmetic operation through keyboard.   [L4] [6M]

6. a) Write a python program to find the given number is odd or even.   [L3] [6M]

   b) Explain break and continue statement with the help of for loop with an example.   [L5] [6M]

7. Explain the syntax of the following statements   [L5] [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.   [L5] 12M]

9. a) Develop a program to find the largest among three numbers.   [L6] [6M]

   b) Write a python program to find the given year is leap or not.   [L3] [6M]

10.a) Write a python program to print factorial of a given number   [L3] [6M]

    b) Implement Python program to find sum of natural numbers.   [L5] [6M]

<u>UNIT – 3</u>

1. a) Define function? Write its syntax   [L1] [3M]
    b) What are formal and actual arguments   [L1] [4M]
    c) Write functions to do all arithmetic operations   [L3] [5M]

2. a) What is recursive function?   [L1] [3M]
    b) Explain lambda function   [L5] [4M]
    c) Write recursive function to find factorial of a number   [L3] [5M]

3. a) Differentiate key word and default arguments   [L4] [6M]

    b) Differentiate global and local variables   [L4] [6M]

4. a) Compare class and object with python code   [L5] [6M]

    b) Narrate scope of a variable in a function   [L2] [6M]

5. a) Write about class constructor(_init_()),self-variable   [L3] [5M]

    b) Compare method overloading and overriding   [L5] [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   [L4] [7M]
    b) What are the cons of using functions   [L1] [5M]

7. What is inheritance? Illustrate types of inheritance with python code   [L1] [12M]

8. a) Write a function to display ASCII Code of entered character   [L3] [5M]

    b) Describe how an object is passed as parameter to a method   [L5] [7M]

9. a) Write a class with following criteria   [L3] [7M]

         Class name: Flower
         Objects: lilly, rose, hibiscus
         Properties: price,color,smell
         Methods: get(), display()
    b) Narrate about polymorphism   [L2] [5M]

10. a)Write a function to return right most digit in the entered number   [L3] [5M]

    b) How do we achieve code reusability in python? Write a python code to
     Explain code reusability   [L1] [7M]

UNIT – 4

1 . a) Explain in details about namespaces and scoping. [L5] 8M
   b) Explain about the import statement in modules [L5]4M

2. a) What are packages? Give an example of package creation in Python. [L1] 5M
   b) Write a small code to illustrate try and except statements in Python. [L3] 5M
   c) What are modules in Python? [L1] 2M

3 . Explain about the different types of Exceptions in Python. [L5] 12M

4 . Describe about Handling Exceptions in detail with examples. [L4] 12M

5. a) What is module? [L1] 2M
   b) How to create a module? Explain with example. [L1] 10M

6
   a What is searching? Explain with example program. [L1] 6M
   b What is matching? Explain with example program. [L1] 6M

7 a List some few common Exception types and explain when they occur [L4] 6M
   b What is an Raising Exception? [L1] 3M
   c What is an User defined Exception? [L1] 3M

8 a Describe the any one regular expression [L4] 6M
   b Explain package installation via pip [L5] 6M

9 Write a syntax for Handling Exceptions with example [L3] 12M
   i try
   ii try-except
   iii try-except-else
   iv try-except-else-finally

10 a What are modules in Python? [L1] 3M
   b How to create a module? [L1] 3M
   c What is import statement in modules ? [L1] 3M
   d What is from import statement in modules ? [L1] 3M

UNIT – 5

1. Explain in detail about Python Files, its types, functions and operations that can be performed on files with examples. [L5] 12M

2. a Explain about command line arguments [L5] 4M

    b Explain about reading and writing files in python [L5] 8M

3. a Explain about Data Compression [L5] 4M

    b Explain about Dates and Times [L5] 8M

4. a What is mean by Iterators and Generators? [L1] 6M

    b Write about map and filter in Python? [L3] 6M

5. Demonstrate about the GUI programming in Python [L2] 12M

    i   Circle

    ii   Triangle

    iii Rectangle

6. a What is mean by Text File? Explain about reading and writing files in python? [L1] 8M

    b What is turtle with an example? [L1] 4M

7. Explain about Functional Programming. [L5] 12M

    i   Iterators

    ii   Generators

    iii Maps

    iv   Filters

8. Explain about Mathematics function in python [L5] 12M

9. A Explain about Python Runtime Services [L5] 8M

    B Explain about Data Compression [L5] 4M

10. a What is Data Management and Object Persistence [L1] 5M

    B Explain about Dates and Times [L5] 7M