SIDDARTHA INSTITUTE OF SCIENCE AND TECHNOLOGY::PUTTUR

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<u>**QUESTION BANK (DESCRIPTIVE)**</u>

Subject with Code: PYTHON PROGRAMMING (19CS0501)

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

Regulation: R19

<u>**UNIT – 1**</u>

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 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]

UNIT – 2

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]

UNIT – 3

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 keyword 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) 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]

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

   b) Discuss method overloading and method overriding with example program. [7M]

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) What is constructor? Explain with example [6M]

    b) Write about class and object. [6M]

UNIT – 4

1. What is name space in python? and explain with example program.   [12M]

2. What is module? How to create that module explain with program.   [12M]

3. Explain about import statement with example program.   [12M]

4. What is package? How to create package explain with example?   [12M]

5. What is PIP? Explain how installing packages via PIP?   [12M]

6. What is exception handling? Write a brief note on it.   [12M]

7. What is try exception block and explain with example program.   [12M]

8. What is user defined exception and explain with example program.   [12M]

9. Illustrate matching and searching in regular expression with an example.   [6+6M]

10. Describe regular expression with example.   [12M]

UNIT – 5

1) Explain about Iterators and Generators in python?   [6+6M]

2) a)Explain about command line arguments.   [6M]

    b) Illustrate maps in python with example.   [6M]

3) Demonstrate about the GUI programming in Python.   [12M]

4) a)Explain about A) Data Compression   B) Dates and Times   [6M]

    b) Write about math function in python.   [6M]

5) a)Write an example for drawing a obtuse triangle using Turtle Graphics   [6M]

    b) Describe file reading with example.   [6M]

6) a)What is turtle graphics in Python? How do you fill a turtle in Python with colour?[6M]
    b) Write python program to display equilateral triangle using turtle graphics.   [6M]
7) What is mean by File? Explain about reading and writing files in python.   [12M]

8) What is mean by Functional Programming? Write about map and filter in Python.[12M]

9) a) What is object persistence?   [2+4+6M]

    b) What is the difference between object persistent and Data Management?

    c) How persistence is handled in database management?

10) Demonstrate about the GUI programming in Python with examples.   [12M]