

**SIDDHARTH INSTITUTE OF ENGINEERING AND TECHNOLOGY :: PUTTUR  
(AUTONOMOUS)**

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**QUESTION BANK (DESCRIPTIVE)**

**Subject with Code:** Python Programming (20CS0511)

**Course & Branch:** B.Tech &  
CSE, CIC, CCC

**Year & Sem:** II & I

**UNIT -I**

**INTRODUCTION, DATA TYPES**

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|----|--|-----------|-------|
| 1  | A) Discuss about History of Python Language.   | [L2][CO1] | [4M]  |
|    | B) List out the Features and Applications of Python.                                 | [L1][CO1] | [8M]  |
| 2  | A) i) Justify the term in python: REPL   | [L5][CO1] | [2M]  |
|    | ii) How will you execute the Python Scripts?   | [L2][CO1] | [4M]  |
|    | B) i) Define Variable and mention rules for choosing names of Variable with example. | [L1][CO1] | [4M]  |
|    | ii) How will you Assign values to variable?  | [L2][CO1] | [2M]  |
| 3  | A) Explain the variable and keywords with suitable example.                          | [L2][CO1] | [6M]  |
|    | B) Illustrate the Input and Output statements with example.                          | [L2][CO1] | [6M]  |
| 4  | A) What is Indentation? Explain with example   | [L1][CO1] | [6M]  |
|    | B) Write a python program to find total and average marks based on Input             | [L4][CO1] | [6M]  |
| 5  | What is data type? List out the data types with example.                             | [L1][CO2] | [12M] |
| 6  | A) Explain about the Single-Valued data types in python.                             | [L2][CO2] | [6M]  |
|    | B) Discriminate about the Multi-Valued Data types with example.                      | [L5][CO2] | [6M]  |
| 7  | Describe the List and its Methods with example.                                      | [L1][CO2] | [12M] |
| 8  | Discuss the basic Tuple Operations with examples.                                    | [L2][CO2] | [12M] |
| 9  | A) What is Set? Explain set Operations.  | [L1][CO2] | [6M]  |
|    | B) What is Dictionary? Explain the Methods available in Dictionary.                  | [L1][CO2] | [6M]  |
| 10 | Demonstrate the String and its Methods with example.                                 | [L2][CO2] | [12M] |

## UNIT -II

### OPERATORS AND EXPRESSIONS, CONTROL FLOW

1	Classify various types of Operators in Python and write any 4 types of Operators.	[L2][CO2]	[12M]
2	A) List and explain different Arithmetic, Comparison and Assignment Operators supported by Python. B) i) Explain the Logical operators with example. ii) Write a python program to find whether a given number is Even or Odd	[L1][CO2] [I2][CO2] [L4][CO1]	[6M] [3M] [3M]
3	A) Discuss the Membership and Identity operators with example. B) write a python program to find biggest number among three numbers	[L2][CO2] [L1][CO1]	[6M] [6M]
4	A) Explain the Bitwise operators with example. B) Rate the order of execution of different Expressions by evaluating them through python program.	[L2][CO2] [L5][CO2]	[6M] [6M]
5	Illustrate different Conditional statements in python with appropriate examples. i) if                      ii) if-else                      iii) i) if-elif-else                      iv) nested if	[L2][CO1]	[12M]
6	Examine the syntax of the following statements with example program. i) While loop ii) for loop	[L4][CO1]	[12M]
7	A) Discuss the term: Range Write a for loop that prints numbers from 0 to 20, using range function. B) Create a python program to generate the multiplication table based on user input.	[L2][CO1] [L6][CO1]	[6M] [6M]
8	A) What are the different loop control statements available in Python? Explain with suitable examples. B) Write a python program to calculate sum of natural numbers.	[L1][CO1] [L4][CO1]	[6M] [6M]
9	A) Analyze the Python jump statements with suitable examples. B) Explain break, continue and Pass statement with the help of for loop with an example.	[L6][CO1] [L2][CO1]	[6M] [6M]
10	A) Create a Python program to display Fibonacci series. B) Develop a Python program to Swapping of two numbers with and without using temporary variable.	[L6][CO1] [L6][CO1]	[6M] [6M]

**UNIT -III**  
**FUNCTIONS, OBJECT ORIENTED PROGRAMMING**

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|----|---|-----------|-------|
| 1  | A) Define function and explain the types of functions with an example.                          | [L1][CO3] | [6M]  |
|    | B) Discuss about key word arguments with example.   | [L2][CO3] | [6M]  |
| 2  | Explain about different types of arguments in Python.   | [L2][CO3] | [12M] |
| 3  | A) Describe about default arguments with suitable program.                                      | [L2][CO3] | [6M]  |
|    | B) Illustrate lambda function with example.   | [L3][CO3] | [6M]  |
| 4  | A) Define Variable-length arguments? Explain with example.                                      | [L1][CO3] | [6M]  |
|    | B) Explain about Anonymous and fruitful functions with examples.                                | [L2][CO3] | [4M]  |
| 5  | A) Create Recursive function to find factorial of a number.                                     | [L6][CO3] | [6M]  |
|    | B) Express function to do all arithmetic operations.  | [L2][CO3] | [6M]  |
| 6  | A) Narrate Scope of a variable in a function.   | [L2][CO3] | [6M]  |
|    | B) Write a python Program to find right most digit in the entered number using return statement | [L1][CO3] | [6M]  |
|    | A) Define Class and Object with example code.   | [L1][CO4] | [6M]  |
| 7  | B) Analyze the term: Self-variable with code.   | [L4][CO4] | [6M]  |
| 8  | What is Inheritance? Illustrate types of inheritance with python code.                          | [L2][CO4] | [12M] |
| 9  | A) Describe about class Constructor ( <code>_init_()</code> ) with example.                     | [L2][CO4] | [6M]  |
|    | B) Demonstrate implementation of hierarchical inheritance in Python, with a program.            | [L2][CO4] | [6M]  |
| 10 | A) What is Polymorphism? How will you perform Method Overloading?                               | [L1][CO4] | [6M]  |
|    | B) Illustrate Method Overriding in Python with suitable example.                                | [L3][CO4] | [6M]  |

## UNIT -IV

## MODULES, PACKAGES, EXCEPTION HANDLING

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|----|---|-----------|-------|
| 1  | What is Module in Python? Explain, how the Modules are used in python program with an example code. | [L5][CO3] | [12M] |
| 2  | A) Describe about name spacing.   | [L2][CO3] | [6M]  |
|    | B) Explain about the import statement in modules.   | [L2][CO3] | [6M]  |
| 3  | A) Describe the types of namespaces in Python?  | [L2][CO3] | [6M]  |
|    | B) Explain the from import statement in modules.  | [L5][CO3] | [6M]  |
| 4  | What is package in Python? Explain the use of packages in your program with an example code.        | [L3][CO6] | [12M] |
| 5  | A) Analyze the term : PIP. Explain installing packages via PIP.                                     | [L3][CO6] | [6M]  |
|    | B) What is numpy? How to create ndarray and write one example?                                      | [L3][CO6] | [6M]  |
| 6  | A) List the steps to create a 1D array and 2D array in numpy  | [L1][CO4] | [6M]  |
|    | B) what is pandas? Write some functions of pandas   | [L3][CO6] | [6M]  |
| 7  | Explain briefly about pandas data structures with example programs                                  | [L2][CO6] | [12M] |
| 8  | A) Classify Errors and Exception Handling in Python programming.                                    | [L4][CO4] | [6M]  |
|    | B) Explain try except block in detail.  | [L2][CO4] | [6M]  |
| 9  | A) Write a python code using try-except-else-finally statement in python.                           | [L3][CO4] | [6M]  |
|    | B) What is a Raising Exception? Write any user defined exception program with raising exception.    | [L1][CO4] | [6M]  |
| 10 | A) What is Regular expression in python? Illustrate searching with example program.                 | [L2][CO5] | [6M]  |
|    | B) Illustrate matching with example program.  | [L2][CO5] | [6M]  |

**UNIT -V****FUNCTIONAL PROGRAMMING, STANDARD LIBRARY, GUI PROGRAMMING**

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|----|--|-----------|-------|
| 1  | Describe in detail about Iterators and Generators with an example.                                       | [L2][CO6] | [12M] |
| 2  | A) Discuss about Maps in python.   | [L2][CO6] | [6M]  |
|    | B) Describe the Filters in python.   | [L2][CO6] | [6M]  |
| 3  | Explain about Functional Programming.  | [L4][CO6] | [12M] |
| 4  | Narrate Python Files, its types, functions and operations that can be performed on files with examples.  | [L4][CO2] | [12M] |
| 5  | A) Illustrate the Command line arguments.  | [L3][CO4] | [6M]  |
|    | B) Explain the reading and writing files in python.  | [L2][CO2] | [6M]  |
| 6  | A) Create a Python Program to display the current date and time  | [L6][CO5] | [6M]  |
|    | B) Write a Python program to demonstrate the file I/O Write a Python program to demonstrate the file I/O | [L4][CO2] | [6M]  |
| 7  | Express about Mathematical functions in python.  | [L2][CO5] | [12M] |
|    | A) Discuss the colors and filled shapes in python using turtle   | [L2][CO4] | [6M]  |
| 8  | B) Illustrate Python Runtime Services and Data Compression.  | [L3][CO4] | [6M]  |
| 9  | Demonstrate about the GUI programming in Python  | [L2][CO6] | [6M]  |
|    | A) Triangle  |           | [6M]  |
|    | B) Rectangle   |           |       |
| 10 | A) What is Data Management and Object Persistence? Explain in detail.                                    | [L1][CO5] | [6M]  |
|    | B) Describe the Turtle using python program.   | [L2][CO4] | [6M]  |

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