

## II B. Tech II Semester Supplementary Examinations, December - 2022

## PYTHON PROGRAMMING

(Common to EEE&amp;FE)

Time: 3 hours

Max. Marks: 70

Answer any **FIVE** Questions each Question from each unitAll Questions carry **Equal** Marks~~~~~  
UNIT – I

- 1 a) Explain various Basic mutable and immutable data types in python. [7M]  
 b) Discuss loop statements in python with suitable Example. [7M]

**Or**

- 2 a) Write a python script to print the following pattern. [7M]  
 1  
 2 2  
 3 3 3  
 4 4 4 4  
 5 5 5 5  
 b) Python variables do not have specific types. Justify this statement with the help of an example. [7M]

## UNIT – II

- 3 a) Write a python program to convert the given decimal number into binary. [7M]  
 b) Write the Encrypted text of each of the following words using a Caesar cipher with a distance value of 3. i) Python ii) hacker iii) wow [7M]

**Or**

- 4 a) Describe the following [7M]  
 i) Creating the string ii) Accessing values in the string  
 iii) Delete character in the string  
 b) Write a Python program using while loop to print first N numbers divisible by 5. [7M]

## UNIT – III

- 5 a) What is List Comprehension? Write a python script to retrieve even and odd numbers from a given list. [7M]  
 b) Write a python script to take input as String sentence S and print each word count using dictionary. [7M]

**Or**

- 6 A polygon can be represented by a list of (x, y) pairs where each pair is a tuple: [14M]  
 [(x1, y1), (x2, y2), (x3, y3), ... (xn, yn)].  
 Write a Recursive function to compute the area of a polygon. This can be accomplished by “cutting off” a triangle, using the Exploring Python– Strings, Lists and Tuples 24 fact that a triangle with corners (x1, y1), (x2, y2), (x3, y3) has area  $(x_1y_1 + x_2y_2 + x_3y_2 - y_1x_2 - y_2x_3 - y_3x_1) / 2$ .



**UNIT – IV**

- 7 a) Demonstrate implementation of hierarchical inheritance in Python, with a program. [7M]
- b) Analyze the university result of various colleges in department wise using read and write file. [7M]

**Or**

- 8 a) Discuss Overriding in Python with example. [7M]
- b) Describe the following terms in detail and depict an example reflecting all the below [7M]
  - i) self ii) Constructor iii) class variable iv) Instance variable

**UNIT – V**

- 9 a) What happens if except clause is written without any Exception type? Explain with an example. [7M]
- b) Write a Python program that creates a GUI with a textbox, Ok button and Quit button. [7M]

**Or**

- 10 a) What is Exception Handling? How exceptions are handled in Python? Write a Python program with exception handling code to solve divide-by-zero error situation. [9M]
- b) Differentiate Command line interface with GUI. [5M]

