Code No: R193104D **R19** **SET - 1**

III B. Tech I Semester Regular Examinations, February-2022

SOFT COMPUTING TECHNIQUES AND PYTHON PROGRAMMING

(Electronics and Communication Engineering)

Time: 3 hours Max. Marks: 75

Answer any **FIVE** Questions **ONE** Question from **Each unit**
All Questions Carry Equal Marks

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UNIT-I

1. a) Explain the concept of scope and lifetime of variables in Python programming language with an example. [8M]
   b) Write a python program to find the sum of individual digits of a positive integer using while loop. [7M]

(OR)

2. a) Explain looping statements in Python. [8M]
   b) What is Type Conversion? Explain with a suitable example. [7M]

UNIT-II

3. a) What are the different operations that can be performed on a list? Explain with examples. [8M]
   b) Explain about scope of Local and global variables with suitable examples. [7M]

(OR)

4. a) What is a Module? How to create and use the module in another Program in python? Explain with an example. [8M]
   b) Write a Python function that computes the harmonic sum of n. Harmonic Sum = (1/2) + (1/4) + (1/8) + (1/16) + ….. + (1/2n). [7M]

UNIT-III

5. a) What are advantages and disadvantages of OOP? Explain. [8M]
   b) Explain about Turtle Graphics in python. [7M]

(OR)

6. a) Explain about structuring classes with inheritance and polymorphism. [8M]
   b) What are built-in classes attributes? Explain. [7M]

UNIT-IV

7. a) What is Soft Computing? Explain its applications. [8M]
   b) Explain about Fuzzy Computing. [7M]

(OR)

8. a) Compare and differentiate soft computing and hard computing. [8M]
   b) What are the basic fuzzy set operations? Explain. [7M]

UNIT-V

9. a) Describe about Attribute Reduction and Knowledge Base use in Rough Sets. [8M]
   b) What is Rule Induction? Explain. [7M]

(OR)

10. a) Explain the steps of Rough Fuzzy C-Means algorithm. [8M]
    b) Define Approximation of Classification. Explain. [7M]

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