B. Tech. (ECE) (Open Elective-II) 6th Semester (G Scheme) Examination, July-2022

PYTHON PROGRAMMING

Paper-OEC-ECE-318-G

Time allowed : 3 hours] *[Maximum marks : 75*

Note : *Attempt any five questions in all, selecting one question from each unit. **Question No. 1 is compulsory**. All questions carry equal marks.*

1. Explain the following : 6×2.5=15

(a) Rules of Precedence to evaluate an expression in Python.

(b) Comparison operators with examples.

(c) Dictionary methods in Python (any three).

(d) Lists in Python.

(e) Abstract class in Python with example.

(f) Built-in-string manipulation functions/methods with examples (any two).

Unit-I

2. (a) What are control statement in Python ? Explain *nested if* statement using suitable examples. 8

(b) Write the algorithm and Python program to find the sum of n numbers. 7

3. (a) Describe various operators available in Python with examples. 8

(b) Write the algorithm and Python program to check if number is Positive, Negative or Zero. 7

Unit–II

4. (a) What are control statements in Python ? Demonstrate the use of break and continue keywords in looping structure using snippet code/ examples. 8

(b) Write the algorithm and Python program to find the sum of digits of a number. 7

5. (a) What do you understand by loop structure in Python ? Discuss "While loop", its syntax with examples. 8

(b) Write a Python Program that reads a text file and changes the file by capitalizing each character of file. 7

Unit-III

6. (a) Illustrate basic list operators used in Python using suitable examples. 6

(b) Write algorithm and python program to search a specific value from the given list of values using Binary Search method and justify with suitable examples. 9

7. (a) Explain Dictionary and Tuples concepts, creation and accessing in Python with the help of suitable examples. 10

(b) Write algorithm and python program to find the factorial of a number using recursive function. 5

Unit-IV

8. Discuss Multilevel & Multiple inheritance with suitable examples. Also appraise the polymorphism mechanism in Python with Syntax. 15

9. (a) Discuss Object Oriented Programming concepts and its advantages with suitable examples. 8

(b) Create a class Student with data members : roll no., name, course, and aggregate marks. Create suitable methods for initialization/reading and displaying student information. 7