**ANNA UNIVERSITY: CHENNAI – 600 025**

B.E/B.Tech Degree Examination –Dec-2017

**(Regulation 2017)**

**First Semester**

**(Common to all Branches)**

**GE8161-Problem Solving and python Programming Laboratory**

Time: 3 Hours Maximum Marks:100

1 a) Write a python Program to find the GCD (Greatest common divisor) of two numbers **50**

b) Write a python Program to calculate the average of numbers in a list **40**

c) ***Viva- Voce* 10**

2 a) Write a python Program to find the square root of a number by Newton's method **50**

b) Write a python Program to get the 5 subjects marks and display the grade for the same. **40**

c) ***Viva- Voce* 10**

3 a) Write a python Program to find the exponentiation of a number **50**

b) Write a python Program to find the sum of digits in a number **40**

c) ***Viva- Voce* 10**

4 a) Write a python Program to find the maximum number in a list **50**

b)Write a python Program to check whether the given number is palindrome or not **40**

c) ***Viva- Voce* 10**

5 a) Write a python Program to perform linear search **60**

b) Write a python Program to read a number and print an inverted star pattern of the desired size **30**

c) ***Viva- Voce* 10**

6 a) Write a python Program to perform binary search **60**

b) Write a python Program to print the table of a number **30**

c) ***Viva- Voce* 10**

7 a) Write a python Program to perform selection sort **50**

b) Write a python Program to take temperature in Celsius and convert it to a Fahrenheit **40**

c) ***Viva- Voce* 10**

8 a) Write a python Program to perform insertion sort **50**

b) Write a python Program to check if a given number is an Armstrong number or not **40**

c) ***Viva- Voce* 10**

9 a) Write a python Program to perform merge sort **60**

b) Write a python Program to list even and odd numbers of a list **30**

c) ***Viva- Voce* 10**

10 a) Write a python Program to find the first n prime numbers **50**

b) Write a python Program to print the pascal's triangle for 'n' number of rows given by the user **40**

c) ***Viva- Voce* 10**

11 a) Write a python program for Matrix multiplication **50**

b) Write a python Program to find the sum of first 'n' natural numbers **40**

c) ***Viva- Voce* 10**

12 a) Write a python program for Matrix addition and Subtraction **90**

c) ***Viva- Voce* 10**

13 a) Write a python program for Command line arguments(word count and line count) **90**

c) ***Viva- Voce* 10**

14 a) Write a python program to find the most frequent words in a text read from a input file **90**

c) ***Viva- Voce* 10**

15 a) Write a python program to stimulate elliptical orbits in Pygame **90**

c) ***Viva- Voce* 10**

16 a) Write a python program to Simulate bouncing ball using Pygame **90**

c) ***Viva- Voce* 10**

17 a) Write a python program to count the number of vowels in a string **50**

b) Write a python Program to check whether the given number is a odd or even **40**

c) ***Viva- Voce* 10**