Reg. No. : ☐☐☐☐☐☐☐☐☐☐☐☐☐

## Question Paper Code : GE8151

B.E./B.Tech. DEGREE EXAMINATION, 2017

First Semester

Civil Engineering

GE8151 - PROBLEM SOLVING AND PYTHON PROGRAMMING

(Common to All Branches)

(Regulations 2017)

Time : Three Hours                                                Maximum : 100 Marks

Answer ALL questions

PART – A**(10×2=20 Marks)**

1. What is an algorithm ?

2. Write a pseudo-code to accept two numbers, add the numbers and print the result.

3. Outline the modes Python interpreter works.

4. State the difference between (I) and (II) operators in Python.

5. Write a Python program to accept two numbers, find the greatest and print the result.

6. What is recursion ?

7. What is a list in Python ? Give example.

8. Write the syntax for concatenating two lists in Python.

9. What is an exception ? Give example.

10. Write the syntax for opening a file in Python for reading only.

## PART – B(5×16=80 Marks)

11. a)  i) Explain with an example the boilding blocks of an algorithm.  **(8)**

    ii) Draw a flow chart to print the first 'n' prime numbers.  **(8)**

    (OR)

    b) Explain with relevant diagrams and algorithm the Towers of Hanoi problem.  **(16)**

12. a i) Explain with an example the structure of a Python program.  **(8)**

    ii) Outline with an example the assignment operators supported in Python.  **(8)**

    (OR)

    b) Explain the various data types in Python.  **(16)**

13. a)  i) Write a Python program using while loop to print the first n numbers divisible by 5.  **(8)**

    ii) Write a Python program to compute the factorial of a given number.  **(8)**

    (OR)

    b) Write Python program to perform binary search.  **(16)**

14. a) Write code snippets in Python to perform the following :

    i) Accessing elements of a tuple.  **(5)**

    ii) Modifying elements of a tuple.  **(5)**

    iii) Deleting elements of a tuple.  **(6)**

    (OR)

    b) Write the Python program to sort an integer list using selection sort.  **(16)**

15. a) Describe in detail how exceptions are handled in Python. Give relevant examples.  **(16)**

    (OR)

    b) Write a Python program to copy the contents of one file to another.  **(16)**

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