Roll No. .....

24424

B. Tech. 7th Semester (EE)

Examination – May, 2019

COMPUTER APPLICATIONS TO POWER SYSTEM ANALYSIS

Paper : EE-409-F

Time : Three Hours] *[Maximum Marks : 100*

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any ***five*** questions, selecting at least ***one*** question from each Section. Question Number **1.** is ***compulsory.*** All questions carry equal marks.

1. (a) What is Contingency analysis in Power System ? 20

(b) What is Bus incidence matrix ?

(c) Discuss Security analysis.

(d) What is Ferranti effect ?

SECTION – A

2. (a) Explain components of Power System. 10

(b) Describe Performance of Transmission line. 10

3. (a) Describe Contingency analysis in detail. 10

(b) Discuss growth of power system. 10

SECTION – B

4. (a) Describe Formulation of Y bus using singular transformation. 10

(b) Explain Gauss Seidal method for Load flow Study. 10

5. (a) Explain Decoupled Load flow studies. 10

(b) Describe Load flow study of distribution system. 10

SECTION – C

6. (a) Explain Sequence networks for synchronous machine. 10

(b) Describe considerations of pre fault currents. 10

7. Explain digital techniques in fault calculations. 20

SECTION – D

8. Discuss RTU. Explain SCADA system in detail. 20

9. (a) Discuss energy control centres and various states of power system. 10

(b) Discuss different various MATLAB power system block. 10