

Code: 17EEPC2T1

**I M.Tech - II Semester – Supplementary Examinations  
July 2019**

**POWER SYSTEM STABILITY AND CONTROL  
(POWER SYSTEM & CONTROL)**

Duration: 3 hours

Max Marks: 60

Answer the following questions.

1. Determine the direct axis and quadrature axis equivalent circuit parameter in per unit basis of a synchronous generator. 15 M

(OR)

2. Explain
- a) Concept of power system stability 3 M
  - b) Steady state stability. 4 M
  - c) Dynamic Stability. 4 M
  - d) Transient Stability. 4 M

3. Deduce SMIB (single machine connected to infinite bus) system equations for small signal stability analysis. 15 M

(OR)

4. Discuss the power system dynamic stability aspect using eigen value approach. 15 M

5. Discuss in detail about transient stability and steady state stability of Power system. 15 M

(OR)

6. List out the methods for improving the transient stability. 15 M

7. List out the methods of preventing the voltage collapse. 15 M

(OR)

8. Draw the characteristics of reactive power compensating devices; signify their use in preventing voltage stability problem. 15 M