

Code: EE8T2

IV B.Tech - II Semester – Regular Examinations – April 2016

**FLEXIBLE A.C. TRANSMISSION SYSTEMS
(ELECTRICAL & ELECTRONICS ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

Answer any FIVE questions. All questions carry equal marks

1. a) Explain the need for transmission interconnections in power systems. 6 M

- b) For the system shown in figure - 1, Derive the expressions for P & Q. 8 M

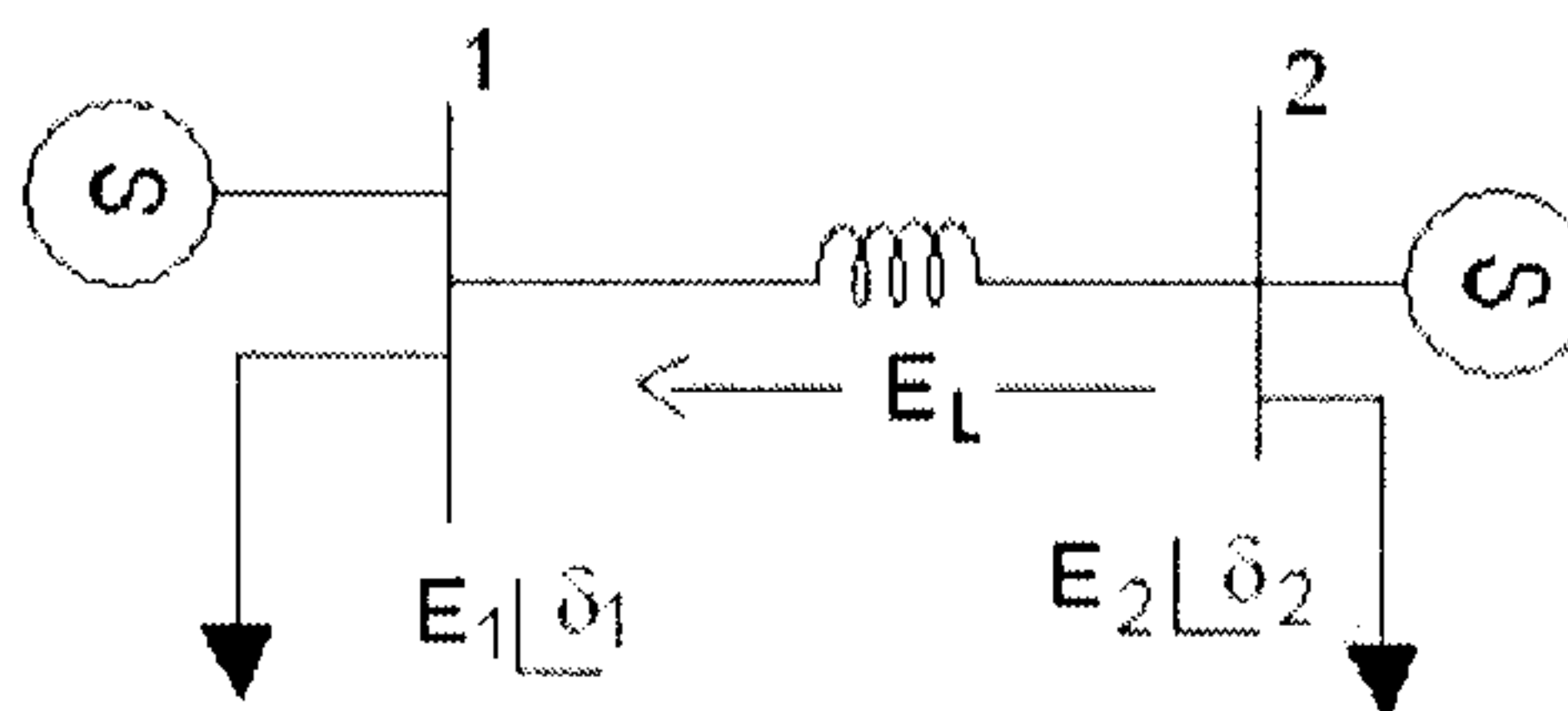


Figure - 1

2. Explain basic types of FACTS Controllers and Explain relative importance of different types of controllers. 14 M

3. Explain the operation of three phase full wave bridge converter and derive the fundamental and harmonic voltages. 14 M

4. Explain the operation of Pulse width modulated converter and explain the technique of harmonic elimination and voltage control. 14 M
5. Briefly explain the objectives of shunt compensation. 14 M
6. Explain TCR & TSR in detail. 14 M
7. a) Explain the basic operating principle of switching converter type Var generators. 7 M
b) Explain basic control approaches for the above Var generator. 7 M
8. Explain basic operating control schemes for GCSC, TSSC and TCSC. 14 M