

M.Tech. (EE – EPS) 2nd Sem. Examination – May, 2013

FACTS CONTROLLERS (MTEPS-202)

Time: Three Hours

Max. Marks: 100

Note: Attempt any FIVE questions. All questions carry equal marks. Assume any missing data in the question paper.

1. Explain reactive power control in electric transmission systems. Also, highlight the physical significance of reactive power control.
2. What do mean by FACTS? What are the basic types of FACTS controllers? Explain the benefits from FACTS controllers.
3. What is the basic concept of current source converters? Explain the voltage source converter in detail. Compare of current source converters with voltage source converters.
4. What do you mean by mid point voltage regulation for line segmentation? Explain the transient stability. What are the steps to be taken to improvement of transient stability? Explain the meaning of power oscillation damping in detail.
5. Explain the different control schemes for GSC, TSSC and TCSC.
6. Explain the combined compensators and phase shifter. Explain the SPS and UPFC.
7. Explain in detail the variable impedance type static var generator. And also explain the term TCR in detail.
8. Explain the dynamic performance, transient stability enhancement and power oscillation damping of SMES in detail.

