

MEPS-201**M.E./M.Tech., II Semester**

Examination, May 2018

Reactive Power Control and FACTs*Time : Three Hours**Maximum Marks : 70*

- Note :** i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) Explain the principal of operation and controls of SSSC. 7
b) Describe damping electromechanical oscillations. 7
2. a) Write the differences between STATCOM, SVC, SSSC, UPFC. 7
b) Explain principal operation of IPFC. 7
3. What is STACOM? Explain its principal of operation, characteristics along with its control. 14
4. a) Explain about the FACTs based stabilizers. 7
b) Discuss the Heffron-Phillips model of SIMB system with UPFC. 7
5. Explain in detailed about the installing location and feedback signal for FACTs based stabilizers. 14

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6. a) Explain power transmission control using phase shifting transformer. 7
b) What are the advantages of FACTs device for transient stability improvement? 7
7. a) What are the general considerations for FACTs control strategies? 7
b) Explain different stabilities in power system. 7
8. Explain Heffron-Phillips model of a Multi-Machine system with TCSC. 14
