

No. of Printed Pages : 03

Roll No.

AA45

M.Tech. EXAMINATION, May 2019

(First Semester)

(B. Scheme) (Re-appear)

EE(PS)

MPS509B

FACTS AND HVDC

Time : 3 Hours]

[Maximum Marks : 75

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

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

(3-27/6) M-AA45

P.T.O.

Unit I

1. Discuss various shunt connected FACTS controller in detail. **15**
2. Write notes on the following :
 - (a) TCSC
 - (b) SSSC. **15**

Unit II

3. (a) How series compensation can be used to damp power oscillations ? **7**
(b) How UPFC controls real and reactive power flow in transmission line. **8**
4. Explain different approaches used in thyristor controlled phase angle regulator (TCPAR). **15**

Unit III

5. (a) How transient stability of transmission line can be enhanced with SATCOM. **8**
(b) Explain control scheme of SMES with neat diagram. **7**

6. Explain control scheme of SVC with neat diagram. How SVC improve power oscillation damping ? **15**

Unit IV

7. (a) What are main components of HVDC transmission ? Explain. **8**
(b) Explain working of six pulse converter with neat diagrams. **7**
8. (a) Discuss different converter faults. **8**
(b) How HVDC transmission system can be interconnected with HVAC system. **7**