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Reg. No. :

Name :

Eighth Semester B.Tech. Degree Examination, November 2015
(2008 Scheme)
08.805 (Elective – IV) (e) HVDC AND FACTS (E)

Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions. **Each** question carries **equal** marks



1. What is passive reactive power compensation ?
2. Explain the need and importants of FACTS Technology.
3. What are the factor which limits the loading capability of the transmission line ?
4. What are the different configuration of SVC ?
5. Explain the performance of FC + TCR.
6. Explain the basic principle of series capacitive compensation.
7. Explain how the shunt compensation using a STATCOM is superior to that using variable impedance type compensators.
8. What are the problems in DC transmission system ?
9. Discuss any two applications of DC transmission system.
10. Write short notes on UPFC. **(10×4=40 Marks)**



PART – B

Answer **any two** questions from **each** Module.

MODULE – I

11. Explain different types FACTS controllers with neat sketches. 10
12. Draw and explain the VI characteristics of STATCOM. 10
13. Analyse lossless distributed parameter transmission line and hence obtain the power equation for symmetrical case. Also derive the mid point condition of a symmetrical line. 10
14. Describe the procedure to locate the FACTS devices in an electrical network. 10

MODULE – II

15. Explain different applications of SVC. 10
16. Explain basic principle of operation of UPFC. 10
17. Explain the performance of TCR. What is the basic difference between TCR and TSR. 10
18. What are the various operating configuration of TCSC ? 10

MODULE – III

19. Explain the basic concept of DC circuit interruption. 10
 20. Explain different types of DC links. 10
 21. Explain monopolar converter station and bipolar converter station with neat figure. 10
 22. What are the various equipments required at the converter station. 10
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