

Total No. of Questions : 8]

[Total No. of Printed Pages : 2

Roll No

EX-8303 (GS)**B.E. VIII Semester**

Examination, May 2018

Grading System (GS)**FACTS**

(Elective - III)

Time : Three Hours

Maximum Marks : 70

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

1. a) Explain the power flow in an A.C. meshed transmission system with necessary diagram. 7
b) What are the basic types of FACTS controller? Explain briefly about each one. 7
2. a) What are the objectives of static Var Compensator in Power system? Explain. 7
b) Explain briefly how the transient stability is enhanced due to static Var Compensator. 7
3. a) Describe the basic concepts of controlled series compensator. 7
b) Explain the operation of TCSC with the help of suitable diagram. 7
4. a) Describe the principle and operation of STATCOM. 7
b) Explain the operation of SSSC and give the comparison between variable series compensation and SSSC. 7

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5. What is Unified Power Flow Controller (UPFC). Explain its principle of operation characteristics along with control its performance. 14
6. a) Explain the control co-ordination of multiple controllers using linear control technique. 7
b) Explain in detail about the different factors of SVC-SVC interaction. 7
7. a) What do you know about modeling of GCSC. 7
b) Describe the application of GCSC. 7
8. Write short notes on (any two): 2×7=14
a) Need of reactive power compensation in Power system
b) SSR mitigation
c) Need for facts controller
d) Prevention of voltage instability

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