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Roll No

EX - 8303**B.E. VIII Semester**

Examination, June 2017

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 AC meshed transmission system with necessary diagram.
b) What are the basic types of FACTS controller? Explain briefly about each one.
2. a) What are the factors which limit loading capability?
b) Discuss the importance of controllable parameters of basic types of FACTS controller.
3. a) Describe the fixed capacitor thyristor controlled reactor type VAR generator with necessary characteristics and expression.
b) Discuss the capability of shunt compensation in improving transient stability.
4. a) Explain the power oscillation damping with shunt compensation.
b) Discuss the capabilities of shunt compensation in improving transient stability.

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5. What are static var generators? Explain the operation of variable impedance type static var generator.
6. What is a STAT COM? What are its applications? Explain its operation.
7. List different series FACTS converters with neat circuit diagram, discuss the operation of Thyristor Switched Series Capacitor (TSSC), and Thyristor Controlled Series Capacitor (TCSC).
8. Briefly discuss the following: (Any two)
 - a) GTO Thyristor controlled series capacitor.
 - b) Thyristor Switched Series Capacitor (TSSC).
 - c) Thyristor controlled series capacitor.
 - d) Compare between HVAC and HVDC transmission system.

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