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**SUBJECT CODE NO: E-8073**  
**FACULTY OF ENGINEERING AND TECHNOLOGY**  
**M.E. (Electrical Power Systems) Examination Nov/Dec 2017**  
**Flexible AC Transmission**  
**(Revised)**

[Time: Three Hours]

[Max.Marks:80]

Please check whether you have got the right question paper.

- N.B
- i) Solve any two questions from each section
  - ii) Assume suitable Data if required.

**Section A**

- Q.1
- a) What is the basic principle of shunt compensator in AC Transmission lines? 10
  - b) State & Explain possible benefits of FACTS? 10
- Q.2
- a) What are the power flow & dynamic stability considerations of a transmission interconnection? 10
  - b) Explain importance of controllable parameters. 10
- Q.3 Write short Notes on any Four. 20
- a) Various FACTS controllers
  - b) Voltage Regulation
  - c) SVC & stat com
  - d) TCPSTIF
  - e) TCSC

**Section B**

- Q.4
- a) Explain with neat sketches, the NGH-SSR damping Scheme. 10
  - b) Explain basic operating principle of UPFC. 10
- Q.5
- a) Explain objectives of voltage & Phase angles regulators. 10
  - b) Explain operating principle of TCBR 10
- Q.6 Write short notes on any FOUR 20
- a) IPFC
  - b) Static VAR system.
  - c) Sub-Synchronous resonance
  - d) Applications of STATCOM.
  - e) Hybrid phase angle regulators.

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