

SUBJECT CODE NO:- P-8231
FACULTY OF ENGINEERING AND TECHNOLOGY
M.E.(Electrical Power Systems) Examination MAY/JUNE-2016
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, wherever required.

Section A

- Q.1
- a) What is the basic principle of shunt compensation in AC Transmission line? 10
 - b) Which parameters of transmission line restricts the line loading capacity? 10
- Q.2
- a) What are the possible benefits from FACTS technology? 10
 - b) Explain the basic operating principle of switched and controlled VAR generators. 10
- Q.3
- Write short notes on **any four** 20
- i) Series compensator
 - ii) Application of STATCOM
 - iii) Comparison of HVDC & FACTS
 - iv) Basic Types of FACTS controller
 - v) Static Var system.

Section B

- Q.4
- a) Explain basic principle of IPFC. 10
 - b) Explain in detail NGH-SSR damping scheme. 10
- Q.5
- a) Explain the objectives of voltage and phase angle regulators? 10
 - b) Explain the basic operating principle of UPFC 10
- Q.6
- Write short notes on **any four** 20
- i) Sub synchronous resonance
 - ii) Multifunctional FACTS controllers
 - iii) Hybrid phase angle regulators.
 - iv) Interline power flow controller.
 - v) Thyristor controlled breaking resistor (TcBR)