

of questions: 06

Total number of pages:[2]

Paper ID:

Max Marks: 60

- All questions are compulsory
- Assume any missing data

All COs

- Draw configurations of TSSC and TCSC.
- Define the term FACTS.
- Differentiate between STATCOM and SVC.
- What is blocked thyristor mode in TCSC operation?
- What is meant by reactive power compensation?
- What are the features of UPFC?
- What is meant by coordination of FACTS controllers?
- What is function of converter 1 in UPFC?
- Define boost factor?
- What is the application of converter in phase shifter?

Q. 2. Briefly explain idea of compensated and uncompensated transmission lines? CO1
OR

Discuss the transmission problems and emergence of FACTS

Q. 3. What is STATCOM? Give its configuration and control strategies with operating characteristics. CO2

OR

Explain variable reactance modeling of TCSC.

Q. 4. Explain principle of operation, configuration and control of SVC? CO2
OR

Explain working and characteristics of TCSC. CO2

Q. 5. Explain with phasor diagram, different modes of operation of UPFC? CO3

OR

Explain basic construction, principle of operation and V-I characteristics of STATCOM.?

Q. 6. What is phase shifter? Explain its construction, purpose. Derive steady state model for SPS.

OR

Explain various power circuit configurations of SPS