

Total No. of Questions : 08

M.Tech.(Power System) (2013 & Onwards) (Sem.-1)

FACTS DEVICES AND POWER TRANSMISSION

Subject Code : MTPS-102

M.Code : 70731

Time : 3 Hrs.

Max. Marks : 100

INSTRUCTION TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

- Q1. Discuss principle of TCSC. Explain different modes of operation of TCSC.
- Q2. Explain the operation of three phase full wave bridge type voltage source converter with a neat circuit along with the necessary waveforms.
- Q3. a) Explain with a neat block diagram general control scheme of Static Var Compensator (SVC).
b) What is transient stability? How attainable enhancement of transient stability can be done by STATCOM.
- Q4. Explain thyristor based current sourced converter- inverter operation and commutation failure.
- Q5. Give principle of operation and functional control scheme of SSSC.
- Q6. With the help of phasor diagram illustrate the conventional transmission control capabilities of UPFC.
- Q7. Explain harmonics on ac and dc side of converters. What are the problems caused due to these harmonics? Explain passive filters.
- Q8. Write a note on :
a) IPFC
b) Need of FACTS Devices

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.