

Duration 3hrs

Total Marks 80

- NB:** 1) Question No. 1 is Compulsory.
2) Attempt any three Questions out of remaining five Questions.
3) Assume suitable data if necessary and justify the same.

- Q1. Answer any four of the following questions
- A) What are the reason for voltage fluctuation? 05
 - B) State objectives of shunt compensator 05
 - C) Explain advantages and disadvantages of passive filter 05
 - D) Explain the merits of transmission interconnections 05
 - E) Explain basic principle of shunt compensation
- Q2 A) Explain power factor correction in a single phase system 10
- Q2 B) Comment how harmonics affect the rotating machines 10
- Q3 A) How amount of power flow takes place in parallel electrical system? 10
- Q3 B) Write the short note on PQ theory. 05
- Q4 A) Explain the operating principle of the Thyristor Controlled Reactor (TCR) in detail with VI characteristic 10
- Q4 B) Enlist common power quality issues. Explain any five of them 10
- Q5 A) Explain the Thyristor controlled phase angle regulator (TCPAR). 10
- Q5 B) Explain various parameters which limit the loading capabilities of transmission line 10
- Q6 A) Explain switching converter type series compensation (SSSC). 10
- Q6 B) What are the objective of load compensation? 10
