

15/05/2025 BE ELECTRICAL SEM-VIII C-SCHEME PQFACTS QP CODE: 10083986

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
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|----|---|----|
| 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 |
