

RGPVONLINE.COM Roll No**MEPS - 104****M.E./M. Tech., I Semester**

Examination, June 2014

Power Electronics Applications to Power Systems*Time : Three Hours**Max. Marks : 70*

- Note:* i) Attempt any five questions.
ii) All questions carry equal marks.

1. What is meant by reactive power capability of an alternator?
Explain capability curve of an alternator.
2. Differentiate between:
 - a) Modeling of medium and long transmission line
 - b) Real and reactive power loss in transmission line.
3. How will you generate elements of GSDF for a bus system?
Discuss its applications.
4. Describe proximity indicators for voltage stability.
5. Explain the effect of shunt compensation in power system
with necessary derivation.
6. Describe solution of load flow using N-R method with the
help of flowcharts.

7. Explain basic principle of FACTS in the transmission of power.
Compare the performance of TSC and SVCs.
8. Write short notes on any two of the following:
 - i) Security constrained economic dispatch
 - ii) Surge impedance loading
 - iii) Rescheduling of reactive power control variables
 - iv) L-index for voltage stability assessment.

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