Roll No ....

MEPS-104

M.E./M.Tech., I Semester

Examination, December 2014

Power Electronics Applications to Power Systems

Time : Three Hours

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Note: All questions are compulsory. All questions carry equal marks. Assume data if necessary.

1. a) Write down the algorithm for formulation of bus impedance matrix.
   b) Explain transmission line model and loadability in detail.

OR

   a) What are the difficulties associated with reactive power transmission?
   b) Explain load flow study in detail.

2. Explain any two of the following in detail
   i) Generation shift distribution factors
   ii) Line outage distribution factors
   iii) Compensated shift factors

OR

   a) What do you understand by pre contingency corrective rescheduling?
   b) What are different power system security levels?

3. a) What are different proximity indicators?
   b) What is the significance of Jacobian participation factors?

OR

   a) Signify the minimum Eigen value of reduced load flow.
   b) What do you understand by voltage stability?

4. Describe flexible AC transmission system.

OR

Explain the configuration and operating characteristics of TCR and FC-TCR.

5. Describe Thyristor Controlled Series Capacitor (TCSC). Write down the advantages and disadvantages.

OR

Explain the basic principle and different modes of operations of TCSC.

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