Total No. of Questions : 8] *[Total No. of Printed Pages : 1*

Roll No ...

MEHP/MTPA/MEPS/MTPS-102

M.E./M.Tech., I Semester Examination, June 2016

Power System Dynamics Analysis and Control

Time : Three Hours

Maximum Marks : 70

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

1. a) Explain briefly the fundamental concepts of stability of dynamics system.
   b) Discuss the voltage stability and voltage collapse.

2. a) Discuss the different states of operation of a system.
   b) Explain the mid term and long term stability.

3. a) Describe the simplified representation of excitation control.
   b) Differentiate between transient stability and steady state stability.

4. Explain the phasor representation and equivalent circuit used in the steady state analysis of synchronous machine in detail.

5. Draw the schematic of stator and rotor circuit of a synchronous machine and derive the basic equation of state and rotor of synchronous machine. Draw all the necessary illustrations.

6. Explain the elements of excitation system in detail. Also explain the various control and protective scheme of excitation system.

7. Explain the mathematical modeling of governor for hydraulic turbine.

8. a) Discuss the power system stabilizer.
   b) Draw and explain the block diagram representation with exciter and AVR.

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