PVP 12

Code: **EEPC2T3**

I M.Tech - II Semester-Regular Examinations – AUGUST 2016

REAL TIME CONTROL OF POWER SYSTEMS
(POWER SYSTEM CONTROL AND AUTOMATION)

Duration: 3 hours Max. Marks: 70

Answer any FIVE questions. All questions carry equal marks

1. Explain the application of power system state estimation with example. 14 M

2. Explain about network bad data observability and Pseudo measurements. 14 M

3.

a) Explain contingency analysis using sensitivity factors. 7 M

b) Explain the AC power flow security analysis algorithm. 7 M

4.

a) Explain different operating states of computer control of power systems. 7 M

b) Discuss the need for real time and computer control of power system. 7 M

5. Explain energy control centres and software requirements for implementing the SCADA. 14 M

6.

a) What is voltage stability and classify the voltage stability. 7 M

b) Explain proximity to voltage instability. 7 M

7.

a) Explain about the determination of long-term voltage stability**.** 7 M

b) Explain the voltage stability V-Q sensitivity analysis**.** 7 M

8. Explain Phasor Measurement Unit (PMU) in real time environment of power system operation and control. 14 M