PVP 12

Code: **EEPC2T6B**

I M.Tech - II Semester-Regular Examinations – September 2015

POWER SYSTEM DEREGULATION
(POWER SYSTEM CONTROL AND AUTOMATION)

Duration: 3 hours Marks: 5x14=70

Answer any FIVE questions. All questions carry equal marks

1. Explain what is the need for deregulation and how prices are expected to go down with deregulation? 14 M

2. a) Classify market models based on contractual arrangements. 7 M

   b) Why regulation is necessary in monopoly model? 7 M

3. a) What is the need for managed spot market and explain about open electricity markets? 7 M

   b) Explain briefly the difference between markets with perfect and imperfect competition. 7 M

4. a) Explain Decentralized Trading Over a Transmission Network. 7 M

b) For a standard two bus lossless systems, the power flow is from bus 1 to bus 2 and Lagrange multiplier associated with the global load-generation balance equation (λ) is equal to 10. The Lagrange multiplier associated with inequality constraint of line flow limit is $\mu 12=0$. Determine the Locational Marginal Price (LMP) on a bus 2. 7 M

5. a) Explain about price based unit commitment in transmission cost allocation. 7 M

b) Explain PBUC formulation and solution. 7 M

6. a) Explain the effect of congestion on Locational Marginal Prices(LMP). 7 M

b) Explain briefly the difference between market splitting and counter trading. 7 M

7. a) Enlist the ancillary services required for generation-load balancing. 7 M

b) Compare compulsory and demand side provision of ancillary services. 7 M

8. Explain about technical, economic and regulatory issues involved in the deregulation of power industry. 14 M