

IV B.Tech II Semester Regular/Supplementary Examinations, April - 2018

**POWER SYSTEM REFORMS**

(Electrical and Electronics Engineering)

Time: 3 hours

Max. Marks: 70

*Question paper consists of Part-A and Part-B**Answer ALL sub questions from Part-A**Answer any THREE questions from Part-B*

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**PART-A (22 Marks)**

1. a) What are the characteristics of Bilateral Contracts restructuring model? [4]
- b) What is meant by available transfer capability (ATC)? Write its importance. [4]
- c) What is meant by congestion management in transmission network? [3]
- d) What is meant by backardation in forward price curves? [3]
- e) What is the role of ISO in electric power market? [4]
- f) What is meant by ancillary service? What types of functions are extended by ancillary services? [4]

**PART-B (3x16 = 48 Marks)**

2. a) Explain the role of ISO in bilateral and pool markets under competitive market environment. [8]
- b) What is a market power? What are the types of Market Power? Explain in detail. [8]
3. Explain the structure of open access same-time information system (OASIS). Also, explain how the information is posted in OASIS. [16]
4. Explain in detail congestion management methods in power markets. [16]
5. Discuss in detail about the electricity price volatility in electricity markets. Explain the factors which contribute to volatility of prices in electricity markets? How electricity price volatility is measured. [16]
6. Discuss about operational planning activities of GENCO in a competitive market environment. [16]
7. Explain following ancillary services briefly:
  - (i) Reactive Power and Voltage Control Service
  - (ii) Scheduling and Dispatch Services
  - (iii) Black Start Capability Service
  - (iv) Reserves Services
  - (v) Frequency Control [16]