

2023
M.E. Electrical Engineering (Power System)
First Semester
EE-8108: Power System Deregulation

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt any five questions. All questions carry equal marks.

x-x-x

- I. a) Explain the structure and different entities in deregulated electricity market with necessary diagram.
b) Differentiate between integrated power system and restructured power system.
- II. Define wheeling in power system and list the main objectives of wheeling. Differentiate between pool model, pool and bilateral trade model and multilateral trade models of deregulation.
- III. What is the difference between ISO and TSO as system operators? What are the main objectives of a system operator? Explain in details the consumer behaviour and supplier behaviour in restructured power system.
- IV. a) What is contract path method of transmission pricing? State the advantages of contract path method of transmission pricing.
b) Explain briefly open access issues and power exchange in Indian power sector.
- V. a) Define congestion management. What are the factors that limit power transfer in transmission line? Also explain the features for congestion management
b) Explain briefly price area congestion management.
- VI. Explain with an example the impact of congestion on power system. How can it be managed? What are the methods available to tackle transmission Congestion?
- VII. Define and explain the terms Total Transfer Capability, Availability Transfer Capacity, Transmission Reliability Margin, Capacity Benefit Margin and Existing Transmission Commitments.

P.T.O.

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VIII. Enumerate the reasons for Transfer capability limitation in restructured power system. What is the significance to find ATC? Explain technique to calculate ATC using DC power flow analysis.

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