

M.Tech-Electrical Power System (CBCS) Sem III
Elective-III : Power System Deregulation

P. Pages : 1

Time : Three Hours



GUG/S/18/10253

Max. Marks : 70

- Notes :
1. All questions carry equal marks.
 2. Answer **any five** questions in all.
 3. Use of non programmable calculator is permitted.
 4. Assume suitable data wherever necessary.
 5. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Discuss briefly following terms. 6
 - i) Stand alone system.
 - ii) State grid code.
 - iii) Power transfer distribution factor.
 - iv) Transmission license.
 - v) State transmission capacity.
 - vi) Transmission pricing.b) What do you understand by power system deregulation? Compare briefly implications of power system regulation with that of deregulation, particularly in the context of Indian power sector. 8
2. a) Discuss with block diagram, the various. Entities involved in the deregulation process. 7
b) Explain the working of Indian Energy Exchange (IEX) for day ahead market. 7
3. a) Explain voltage control and reactive power support as a part of ancillary services. 8
b) Discuss the wholesale competition market model. Draw block diagram write merits and demerits. 6
4. a) Write a short note on the following electricity trading models based on industrial structure: 8
 - i) Pool and Bilateral trades
 - ii) Multi lateral trades.b) Explain various ISO (Independent System Operator) Models. 6
5. a) State and explain various methods of transmission pricing. 8
b) Compare with suitable example postage stamp method with incremental postage stamp method. 6
6. a) What is the importance of congestion management in the deregulated environment. 6
b) What are transmission congestion issues, Explain in detail. 8
7. a) Explain the Available Transfer Capability (ATC) in detail. 6
b) Explain the various transmission pricing methods briefly. 8
8. a) Explain the institutional structure of Indian power sector before and after restructuring opted. 6
b) Explain the function of 8
 - i) PFC
 - ii) CEA.
