

M.Tech. Electrical Power System CBCS Pattern Semester-III  
**PEPS322-Elective-III : Power System Deregulation**

P. Pages : 1

Time : Three Hours



**GUG/W/23/11068**

Max. Marks : 70

Notes :

1. All questions carry equal marks.
2. Answer **five** question.
3. Due to credit will be given to neatness and adequate dimensions.
4. Illustrate your answer where necessary with the help of neat sketches.
5. Use a non-programmable calculator is permissible.
6. Assume suitable data wherever necessary.
7. Use of slide rule, Logarithmic table, Steam table, Mollier's chart, Drawing instruments, Thermodynamic table for moist air, Psychrometric chart and Refrigeration charts is permitted.

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|----|----|---|----|
| 1. | a) | Compare various market and models with clear explanation.   | 7  |
|    | b) | Explain the bilateral and contractual model in deregulation.  | 7  |
| 2. | a) | Explain the working of Indian Energy exchange (IEX) for day-ahead market.   | 7  |
|    | b) | Discuss about the challenges before the Indian power sector.  | 7  |
| 3. | a) | What are the transmission congestion issue, explain in detail.  | 7  |
|    | b) | Explain the Available Transfer Capability (ATC) in detail.  | 7  |
| 4. | a) | Explain the benefits of power industry deregulation.  | 7  |
|    | b) | What are different entities in deregulated environment. Hence explain role of Genco, Transco & Discom in power system deregulation. | 7  |
| 5. | a) | Explain the need of restructuring of power system in detail.  | 7  |
|    | b) | Explain transmission pricing method with incremental cost based on location marginal pricing (LMP).                                 | 7  |
| 6. | a) | What is the importance of congestion management in the deregulated environment.   | 7  |
|    | b) | What are the present challenges before the Indian power sector. Explain them.   | 7  |
| 7. |    | Write features of Electricity act 2003 in light of power system deregulation.   | 14 |
| 8. |    | Explain in details the Inter zonal and Intra zonal congestion management.   | 14 |

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