

18BB1103

M. Tech. EXAMINATION, 2020

(Second Semester)

(C Scheme) (Main & Re-appear)

RESTRUCTURED POWER SYSTEMS

MPS520C

Electric Engg. (EPS)

Time : 3 Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Q. No. 9 is compulsory. Attempt remaining *Four* questions by selecting *one* from each Unit. All questions carry equal marks.

Unit I

1. (a) Describe the unbundling in restructured power system. 7½
(b) How consumer behaviour does differ from supplier behaviour in restructured power system ? 7½
2. (a) What do you mean by Market Power ? Explain in detail. 7½
(b) Develop which market model is suitable for modern restructuring power system. 7½

Unit II

3. (a) Briefly discuss the determination of Market Clearing Price for single sided linear bid Market. 7½
(b) Write a short note on wheeling and transmission charges. 7½

4. (a) How to find price using MW-Mile in transmission pricing ? 7½
- (b) Explain different method of loss allocation in transmission. 7½

Unit III

5. (a) Formulate the voltage control and reactive power support in ancillary service in power system under deregulated nature. 7½
- (b) Explain, why ancillary service is used for renewable energy sources in deregulated power systems ? 7½
6. (a) Discuss issues in Reactive power management and its cost of production. 7½
- (b) Explain, how to relate co-optimization of energy and reserve services in restructured power system ? 7½

Unit IV

7. (a) Explain congestion management in power system with suitable example. 7½
- (b) Describe the applications of FACTS devices in congestion management. 7½
8. (a) Describe zonal congestion management approach using real and reactive power scheduling. 7½
- (b) How to calculate ATC using DC power flow analysis in the deregulation environment of power system ? 7½
9. (a) Differentiate mean elastic and inelastic market in restructured power system.
- (b) Explain briefly the separation of ownership and operation.
- (c) How to apply merchant transmission investment in restructuring ?
- (d) What is meant by composite price paradigm ?
- (e) Why congestion management considered to be significant in restructured systems ? 3×5=15