

23259

**M.Tech. 1st Semester (Electrical Power System)  
Examination, December-2017**

**POWER SYSTEM OPERATION & CONTROL**

**Paper-MTEPS-103**

*Time allowed : 3 hours]*

*[Maximum marks : 100*

*Note : Attempt any five questions.*

1. (a) Explain the constraints in unit commitment. 10  
(b) Explain unit commitment problem solution by priority-list method. 10
2. (a) Explain with a flowchart of dynamic programming solution in unit commitment problem. 15  
(b) What do you mean by Economic Load Dispatch. 5
3. (a) Explain the dynamic response of an isolated area for load frequency control with first order approximation. 10  
(b) Discuss single area load frequency control of speed governing system. 10
4. (a) Explain the dynamic response of load frequency control of two area system with a neat block diagram. 10  
(b) Discuss proportional plus integral control of single area and its block diagram representation. 10

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5. (a) Explain the steady state response of a controlled two area system. 10
- (b) Sketch and explain the block schematic of a controlled two-area system. 10
6. (a) Explain load frequency control problem in a Multi-area power system. 10
- (b) Discuss performance index and optimal parameter adjustment of two area system. 10
7. (a) Discuss brief introduction of take-or-pay fuel supply contract. 10
- (b) Explain the fuel scheduling by linear programming. 10
8. (a) What is power pool economy interchange? 10
- (b) Discuss interchange evaluation with unit commitment. 10