

Code: 20EE6601

**III B.Tech - II Semester – Regular Examinations – JUNE 2023**

**RESTRUCTURED POWER SYSTEM  
(HONORS in ELECTRICAL & ELECTRONICS ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.

2. All parts of Question must be answered in one place.

BL – Blooms Level

CO – Course Outcome

			BL	CO	Max. Marks
<b>UNIT-I</b>					
1	a)	Illustrate the need and structure of restructured power system.	L3	CO2	7 M
	b)	What are the different types of models of the competition in restructured power system?	L2	CO1	7 M
<b>OR</b>					
2	a)	Explain the structure and different entities in deregulated electricity market with necessary diagram.	L3	CO2	7 M
	b)	Describe the wholesale competition model with block diagram.	L2	CO1	7 M
<b>UNIT-II</b>					
3	a)	Discuss the modeling of the consumers in power system economics.	L3	CO2	7 M
	b)	Discuss the modeling of the producers in power system economics.	L3	CO2	7 M

<b>OR</b>					
4	a)	Explain short-run costs, long-run costs in deregulated power system.	L4	CO4	7 M
	b)	Explain spot market, forward contracts and forward markets in deregulated power system.	L4	CO4	7 M
<b>UNIT-III</b>					
5	a)	Compare pool market with bilateral trading.	L4	CO4	7 M
	b)	Analyze the Role of Independent System Operator (ISO).	L4	CO4	7 M
<b>OR</b>					
6	a)	Explain operational planning activities of ISO– in pool markets and bilateral markets.	L3	CO3	7 M
	b)	Explain markets participation issues and Market Clearing Price (MCP).	L4	CO4	7 M
<b>UNIT-IV</b>					
7	a)	What is power wheeling? Explain the types of transmission services in open market.	L4	CO4	7 M
	b)	Explain embedded cost based transmission pricing method used in the deregulated market.	L4	CO4	7 M
<b>OR</b>					
8	a)	Explain the incremental cost method for transmission pricing in deregulated market.	L3	CO3	7 M
	b)	Explain the concept of power pricing in deregulated electricity markets?	L3	CO3	7 M

**UNIT-V**

9	a)	Explain about voltage control and reactive power support devices.	L4	CO4	7 M
	b)	Classify ancillary services. Explain the provisions in ancillary services?	L3	CO3	7 M
<b>OR</b>					
10	a)	Analyze load generation balancing in ancillary service under restructured environment in power system.	L4	CO4	7 M
	b)	Explain about ancillary services and its classification.	L3	CO3	7 M