

JK LAKSHMIPAT UNIVERSITY, JAIPUR

INSTITUTE OF ENGINEERING AND TECHNOLOGY

End Term Examination (Regular), April-May 2015

B. Tech in Electrical Engineering, Semester 6th

Roll No.....

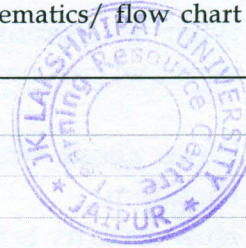
EE604: Restructured Power System

Time: 3 hours

Max. Marks: 100

Instructions to students:

1. Do not write anything other than your roll number on question paper.
2. Assume suitable data wherever required and mention it clearly.
3. Writing appropriate units, nomenclature, and drawing neat sketches/schematics/ flow chart wherever, required are an integral part of the answer.



Q.1A	Short answer type questions (10 questions @ 1 mark)	10
i.	Define deregulation.	
ii.	What does Lagrange Multiplier denotes?	
iii.	What is the concept behind making of power pool?	
iv.	How OPF application-Preventive and Corrective Rescheduling works?	
v.	What is Bid?	
vi.	What do you mean by ancillary services?	
vii.	Write the name of any two parameters affecting bidding strategies.	
viii.	Give one difference between discriminated and non-discriminated auction.	
ix.	Write the equation describing objective function of the Genco in deregulated environment.	
x.	What do you mean by power system restructuring?	
Q.2A	What are the benefits from a competitive electricity market?	05
Q.2B	Write a note on transition in India. Also mention private participation in transmission in India.	05
Q.3A	What is power wheeling? Also define its types.	05
Q.3B	What do you mean by energy brokerage system?	05
Q.4A	Write any five constraints in designing the unit commitment problem.	05
Q.4B	Write a short note on power pools.	05
Q.5A	What is economic load dispatch problem? How to formulate the objective function of this problem?	05
Q.5B	Write different limits in formulating basic optimal power flow model.	05
Q.6A	What do you mean by unit commitment in deregulated environment? Write down the objective function of genco in deregulated environment.	05
Q.6B	How double auction power pool works in market settlement for maximizing the social welfare?	05
OR		

Q.6B	How single auction power pool works in market settlement for maximizing the social welfare?	05
Q.7A	Differentiate role of ISO in open access and pool market.	05
Q.7B	Draw the structure of UK electricity sector deregulation.	05
	OR	
Q.7B	Draw the structure of Nordic electricity sector deregulation.	05
Q.8	What is incremental cost based transmission pricing? Explain short-run marginal cost based pricing and long-run marginal cost based pricing.	10
Q.9A	Write about transmission open access and pricing mechanism for United Kingdom.	10
Q.9B	How security is managed in deregulated environment?	10
	OR	
Q.9B	Write a short note on following: 1) Scheduling of spinning reserves 2) Interruptible load options for security management in different countries	10

