LESSON PLAN

RELIABILITY OF POWER SYSTEM(M.Tech 2nd-PSE)

NAME OF FACULTY: PRATYUSHA PRATIK

	Module No.	Topics to be Covered	Signature of Faculty
1	I	Generating Capacity Basic Probability Methods: The generation system model,	
2	I	Loss of load indices, Equivalent forced outage rate,Capacity expansion analysis,	
3	I	Scheduled outages,	
4	I	Evaluation methods on period basis,	
5	I	Load forecast uncertainty,	
6	I	Forced outage rate uncertainty,	
7	I	Loss of energy indices.	
8	I	Generating Capacity Frequency & Duration Method	
9	I	System risk indices.	
10	I	The generation model,System risk indices.	
11	I	Interconnected Systems: Probability error method in two interconnected systems,	
13	I	Factors affecting the emergency assistance available through the interconnections,	
14	I	Variable reserve versus maximum	

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		peak load reserve,	
15	I	Reliability evaluation in three interconnected system	
16	I	, multi connected system,Frequency & duration approach.	
17	I	Operating Reserve: General concepts, PJM method,	
18	I	Extension to PJM method, Modified PJM method,	
19	II	Postponable outages, Security function approach,	
20	II	Response risk, Interconnected systems.	
21	III	Composite Generation & Transmission Systems: Radial configurations	
22	III	Conditional probability approach	
23	III	Network configurations, State selection,	
24	III	System & load point indices,	
25	III	Application to practical systems,	
26	III	Data requirements for composite system reliability.	
27	III	Plant & Station Availability: Generating plant	

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		availability	
28	III	De rated states & auxiliary systems	
29	III	Allocation & effect of spares,	
30	III	Protection systems, HVDC systems.	
31	IV	Distribution Systems Basic Techniques & Radial Networks: Evaluation techniques	
32	IV	additional interruption indices	
33	IV	Application to radial systems,	
34	IV	effect of lateral distributor protection, Effect of disconnects	
35	IV	Effect of protection failures, effect of transferring loads,	
36	IV	Probability distributions of reliability indices. Distribution Systems-Parallel & Meshed Networks	
37	IV	Basic evaluation techniques, Inclusion of busbar failures	
38	IV	Inclusion of scheduled maintenance, Temporary & transient failures	
39	IV	Inclusion of weather effects,	
Date			