

VEER SURNDRA SAI UNIVERSITY OF TECHNOLOGY, BURLA, ODI:
LESSON PLAN

Semester: 2nd MTECH Session: 2015-16

Subject: POWER SYSTEM OPTIMIZATION (Theory)

Branch: Electrical Engineering,

Name of Faculty: Miss Sagarika Rout

Period	Module No.	Topics to be Covered
1	I	Economic Load Dispatch Of thermal Generating Units
2	I	Generator operating cost
3	I	Economic Dispatch problem on a bus bar
4	I	Economic Dispatch problem on a bus bar
5	I	Optimal generation scheduling
6	I	Economic dispatch using Newton-Raphson method
7	I	Economic dispatch using Newton-Raphson method
8	I	Economic dispatch using the approximate Newton-Raphson method
9	I	Economic dispatch using efficient method,; Function of generation & loads.
10	I	Economic dispatch using efficient method,; Function of generation & loads.
11	II	Optimal Hydro thermal Scheduling: Introduction
12	II	Hydro plant performance Models,
13	II	Short- Range Fixed-Head Hydro thermal Scheduling
14	II	Newton-Raphson for short-range fixed –head hydro thermal scheduling
15	II	Approximate Newton-Raphson method for short range fixed-head hydro thermal Scheduling
16	II	Short-Range variable-head hydro thermal scheduling-Classical Method
17	II	Approximate Newton-Raphson method for short -range variable-head hydro thermal scheduling
18	II	Hydro plant modeling for long term operation
19	II	Hydro plant modeling for long term operation
20	II	Long-Range generation scheduling of hydro thermal systems
21	III	Multi-Objective Generation Scheduling: Introduction
22	III	Multi-Objective Generation Scheduling: Introduction
23	III	State of the art
24	III	Fuzzy set theory in power system
25	III	the surrogate worth trade of approach for multi objective thermal problem
26	III	power dispatch problem
27	III	multi objective thermal power dispatch
28	III	multi objective thermal power dispatch weighing method

29	III	multi objective dispatch for active & reactive power balance
30	III	multi objective dispatch for active & reactive power balance
31	IV	Stochastic Multi Objective Generation Scheduling: Introduction
32	IV	multi-objective stochastic optimal thermal power dispatch- constant method
33	IV	multi-objective stochastic optimal thermal power dispatch- The surrogate worth trade-off method
34	IV	weighing method
35	IV	stochastic economic-emission load dispatch
36	IV	risk/dispersion method
37	IV	stochastic multi-objective short term hydro thermal scheduling
38	IV	stochastic multi-objective short term hydro thermal scheduling
39	IV	stochastic multi -objective long-term hydro thermal scheduling
40	IV	stochastic multi -objective long-term hydro thermal scheduling

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