SYNERGY POLYTECHNIC, BBSR

Lesson Plan

Discipline : EE	Semester : 4th	Name of the Teaching Faculty : DILIP KUMAR NAYAK
SUBJECT : GTD	No of Days/per week class allotted: 04	Semester from Date: to Date: No of Weeks: 14
Week	Class Day	Theory/Practical Topics
1st	1st	**1. GENERATION OF ELECTRICITY: Introduction**
	2nd	Elementary idea on generation of electricity from Thermal .
	3rd	Hydel & Nuclear Power station.
	4th	Introduction to Solar Power Plant (Photovoltaic cells).
2nd	1st	Layout diagram of generating stations.
	2nd	**2. TRANSMISSION OF ELECTRIC POWER**
	3rd	Layout of transmission and distribution scheme.
	4th	Voltage Regulation & efficiency of transmission.
3rd	1st	State and explain Kelvin's law for economical size of conductor.
	2nd	Corona and corona loss on transmission lines.
	3rd	**3. OVER HEAD LINES**
	4th	Types of supports, size and spacing of conductor.
4th	1st	Types of conductor materials.
	2nd	State types of insulator and cross arms.
	3rd	Sag in overhead line with support at same level and different level.
	4th	Approximate formula effect of wind, ice and temperature
5th	1st	Simple problem on sag.
	2nd	**4. PERFORMANCE OF SHORT & MEDIUM LINES**
	3rd	Calculation of regulation and efficiency.
	4th	**5. EHV TRANSMISSION**
6th	1st	EHV AC transmission ,Reasons for EHV AC transmission.
	2nd	Problems involved in EHV transmission.
	3rd	HV DC transmission.
	4th	Advantages and Limitations of HVDC transmission system.
7th	1st	**6. DISTRIBUTION SYSTEMS : Introduction**
	2nd	Connection Schemes of Distribution System : Radial
	3rd	Ring Main and Inter connected system
	4th	DC distributions,Distributor fed at one End.
8th	1st	Distributor fed at both the ends.
	2nd	Ring distributors.
	3rd	AC distribution system.

	4th	Method of solving AC distribution problem.
9th	1st	Three phase four wire star connected system arrangement.
	2nd	**7. UNDERGROUND CABLES**
	3rd	Cable insulation and classification of cables.
	4th	Types of L. T. & H.T. cables with constructional features.
10th	1st	Methods of cable lying.
	2nd	Localization of cable faults: Murray Varley loop test for short circuit fa
	3rd	Localization of cable faults : continuing
	4th	**8. ECONOMIC ASPECTS**
11th	1st	Causes of low power factor
	2nd	Methods of improvement of power factor in power system.
	3rd	Factors affecting the economics of generatio
	4th	Load curves, Demand factor , Maximum demand.
12th	1st	Load factor,Diversity factor,Plant capacity factor.
	2nd	Peak load and Base load on power station.
	3rd	Problems solving
	4th	**9. TYPES OF TARIFF**
13th	1st	Desirable characteristic of a tariff.
	2nd	Explain flat rate, block rate, two part and maximum demand tariff.
	3rd	Problems solving
	4th	**10. SUBSTATION**
14th	1st	10.1 Layout of LT, HT and EHT substation.
	2nd	10.2 Earthing of Substation, transmission and distribution lines.

HoD 13/11/24

PRINCIPAL 13/1/24