Vedang Institute of Technology, 2nd Shift

Khurda

Department of Electrical & Electronics Engineering

Lesson Plan for Even Semester

Course: Diploma in Engineering

Teachers Name: Debananda Sunani

Semester: 4th

Subject : GENERATION TRANSMISSION & DISTRIBUTION

Session Duration: 2020-21 Class From: 19/04/2021 to 13/08/2021

Date	Module	Topics To Be Covered
1st	1st	Elementary idea on generation of electricity from Thermal, Hydel, Nuclear, Power station.
	2nd	
	3rd	
	4th	
2nd	1st	Layout diagram of generating stations.
	2nd	
	3rd	
	4th	Introduction to Solar Power Plant (Photovoltaic cells).
3rd	1st	Draw layout of transmission and distribution scheme.
	2nd	Explain voltage Regulation & efficiency of transmission.
	3rd	State and explain Kelvin's law for economical size of conductor.
	4th	Explain corona and corona loss on transmission lines.
4th	1st	State types of supports, size and spacing of conductor.
	2nd	Types of conductor materials.
	3rd	State types of insulator and cross arms.
	4th	Derive for sag in overhead line with support at same level and different level (approximate formula effect of wind, ice and temperature on sag simple problem)
5th	1st	
	2nd	Calculation of regulation and efficiency
	3rd	
	4th	

6th	1st	Explain EHV AC transmission.
	2nd	Explain Reasons for adoption of EHV AC transmission.
	3rd	Problems involved in EHV transmission.
	4th	Explain HV DC transmission.
7th	1st	Explain HV DC transmission.
	2nd	State Advantages and Limitations of HVDC transmission system.
	3rd	Introduction to Distribution System.
	4th	Explain Connection Schemes of Distribution System – (Radial, Ring Main and Inter connected system)
8th	1st	Explain DC distributions (a) Distributor fed at one End (b) Distributor fed at both the ends (c) Ring distributors.
	2nd	Explain AC distribution system.
	3rd	Explain Method of solving AC distribution problem
	4th	
9th	1st	Explain three phase four wire star connected system arrangement
	2nd	
	3rd	Explain cable insulation of cables
	4th	Classification of cables.
10th	1st	State Types of L. T. & H.T. cables with constructional features.
	2nd	State and Explain Methods of cable lying.
	3rd	State methods of Localisation of cable faults – Murray and Varley loop test for short circuit fault/Earth fault.
	4th	State and explain causes of low power factor.
11th	1st	Explain methods of improvement of power factor.
	2nd	Define & explain Load curves.
	3rd	Define & explain Demand factor.
	4th	Define & explain Maximum demand.
12th	1st	Define & explain Load factor.
	2nd	Define & explain Diversity factor.
	3rd	Define & explain Plant capacity factor.
	4th	Define & explain peak load and Base load on power station
13th	1st	Explain flat rate rate tariff with problems
	2nd	Explain two part tariff with problems
	3rd	Explain and block rate tariff with problems
	4th	Draw and explain layout of LT. HT and EHT substation
14th	1st	
	2nd	Draw and Explain Earthing of Substation

14th	3rd	Draw and Explain Earthing of Transmission
	4th	Draw and Explain Earthing of Distribution Lines
15th	1st	Problem Solving
	2nd	
	3rd	Solve Previous Year Question Paper
	4th	

Debananda Sunani
Faculty Signature

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HOD