MAHAMAYA INSTITUTE OF MEDICAL AND TECHNICAL SCIENCE, NUAPADA

BRANCH: ELETRICAL ENGINEERIG

LESSON PLAN

SEMESTER: 4TH SUBJECT: GENERATION TRANSMISSION & DISTRIBUTION ASSIGNED FACULTY: BARADA PRASAD SAHOO

SL.NO.	CHAPTER	SUBJECT	PERIOD	DATE	SIGN	REMARKS
1		**GENERATION OF ELECTRICITY**	7			
	1.1	Give Elementary idea on generation of electricity from Thermal / Hydel / Nuclear Power station.	4			
	1.2	Draw layout of generating stations.	3			
2		**TRANSMISSION OF ELECTRIC POWER**	5			
	2.1	Draw layout of transmission and distribution scheme.	2			
	2.2	Explain voltage Regulation & efficiency of transmission	1			
	2.3	State and explain Kelvin's law for economical size of conductor.	1			
	2.4	Explain corona and corona loss on transmission lines	1			
3		**OVER HEAD LINES**	7			
	3.1	State types of supports, size and spacing of conductor.	2			
	3.2	Types of conductor materials	2			
	3.3	State types of insulator and cross arms	1			
	3.4	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)	2			
4		**PERFORMANCE OF SHORT & MEDIUM LINES**	7			
	4.1	Calculation of regulation and efficiency.	7			
5		**. EHV TRANSMISSION**	7			
	5.1	Explain EHV AC transmission	2			
	5.2	Explain Reasons for adoption of EHV AC transmission	2			
	5.3	Problems involved in EHV transmission.	1			
	5.4	Explain HV DC transmission.	1			
	5.5	State Advantages and Limitations of HVDC transmission system	1			
6		**DISTRIBUTION SYSTEMS**	7			
	6.1	Introduction to Distribution System. Explain Connection Schemes of Distribution System–(Radial, Ring Main and Inter connected system)	2			
	6.2	Explain DC distributions (a) Distributor fed at one End (b) Distributor fed at both the ends (c) Ring distributors.	2			
	6.3	Explain AC distribution system. Explain Method of solving AC distribution problem.	2			
	6.4	Explain three phase four wire star connected system arrangement	1			

7		**UNDERGROUND CABLES**	6			
	7.1	Explain cable insulation and classification of cables.				
	7.2	State Types of L. T. & H.T. cables with constructional features				
	7.3	State and Explain Methods of cable lying.				
	7.4	State methods of Localisation of cable faults – Murray and Varley loop test for short circuit fault/Earth fault.				
8		**ECONOMIC ASPECTS**	6			
	8.1	State and explain causes of low power factor	1			
	8.2	Explain methods of improvement of power factor				
	8.3	Define & explain Load curves	1			
	8.4	Define & explain Demand factor.	1			
	8.5	Define & explain Maximum demand				
	8.6	Define & explain Load factor	1			
	8.7	Define & explain Diversity factor	1			
	8.8	Define & explain Plant capacity factor	1			
	8.9	Define & explain peak load and Base load on power station				
9		**TYPES OF TARIFF**	3			
	9.1	Explain flat rate and two part tariff and block rate tariff with problems	3			
10		**. SUBSTATION**	5			
	10.1	Draw and explain layout of LT. HT and EHT substation	3			
		Draw and Explain Earthing of Substation, transmission				