LESSION PLAN 4TH SEMESTER(2021-22)				
SUBJECT-TH4.GENERATION TRANSMISSION & DISTRIBUTION				
NAME OF THE FACULTY- MR.LAXMIDHAR SAHU				
MONTH	MODULE/UNIT	COURSE TO BE COVERED	TOTAL NO. OF CLASS	TOTAL NO. OF CLASS
MARCH	**UNIT-1**	**1. GENERATION OF ELECTRICITY**	**07**	
		1.1 Elementary idea on generation of electricity from Thermal, Hydel, Nuclear, Power station	03	
		1.2 Introduction to Solar Power Plant (Photovoltaic cells).	02	
		1.3 Layout diagram of generating stations	02	
MARCH	**UNIT-2**	**2. TRANSMISSION OF ELECTRIC POWER**	**05**	
		2.1 Layout of transmission and distribution scheme	01	
		2.2 Voltage Regulation & efficiency of transmission	01	
		2.3 State and explain Kelvin's law for economical size of conductor	02	
		2.4 Corona and corona loss on transmission lines	01	
APRIL	**UNIT-3**	**3. OVER HEAD LINES**	**07**	
		3.1 Types of supports, size and spacing of conductor	01	
		3.2 Types of conductor materials	01	
		3.3 State types of insulator and cross arms	02	
		3.4 Sag in overhead line with support at same level and different level. (approximate formula effect of wind, ice and temperature on sag)	01	
		3.5 Simple problem on sag	02	
APRIL	**UNIT-4**	**4. PERFORMANCE OF SHORT & MEDIUM LINES**	**07**	
		4.1.Calculation of regulation and efficiency	07	
APRIL/ MAY	**UNIT-5**	**5. EHV TRANSMISSION**	**07**	
		EHV AC transmission. Reasons for adoption	04	

		of EHV AC transmission. 5.1.2. Problems involved in EHV transmission		
		HV DC transmission. Advantages and Limitations of HVDC transmission system	03	
MAY	**UNIT-6**	**6. DISTRIBUTION SYSTEMS**	**07**	
		6.1 Introduction to Distribution System	01	
		6.2 Connection Schemes of Distribution System: (Radial, Ring Main and Inter connected system)	02	
		DC distributions. Distributor fed at oneEnd. Distributor fed at boththe ends. Ring distributors	02	
		AC distribution system. Method of solvingAC distribution problem. Three phase four wirestar connected system arrangement	02	
MAY	**UNIT-7**	**7. UNDERGROUND CABLES**	**06**	
		7.1 Cable insulation and classification of cables	02	
		7.2 Types of L. T. & H.T. cables with constructional features	01	
		7.3 Methods of cable lying	02	
		7.4 Localization of cable faults: Murray and Varley loop test for short circuit fault/ Earth fault	01	
JUNE	**UNIT-8**	**8. ECONOMIC ASPECTS**	**06**	
		8.1 Causes of low power factor and methods of improvement of power factor in power system	01	
		Factors affecting the economics of generation: (Define and explain) Load curves.	03	

		Demand factor. Maximum demand. Load factor. Diversity factor. Plant capacity factor		
		8.3 Peak load and Base load on power station	02	
JUNE	**UNIT-9**	**9. TYPES OF TARIFF**	**03**	
		9.1.Desirable characteristic of a tariff	01	
		9.2.Explain flat rate, block rate, two part and maximum demand tariff. (Solve Problems	02	
JUNE	**UNIT-10**	**10. SUBSTATION**	**05**	
		10.1 Layout of LT , HT and EHT substation	02	
		10.2 Earthing of Substation, transmission and distribution lines.	03	