


GOVT.POLYTECHNIC SAMBALPUR, RENGALI

LESSON PLAN

Electrical Engg.	Semester -4th (CEI)	Faculty name –SUDHANSHU SWAIN
Subject – Th4(GTD)	No. of days/per week class allotted-4p/w	Semester from date-10.03.2022 to 10.06.2022 Number of weeks-15
Week	Class day	Theory topic
1 st (14.03.2022 to 19.03.2022)	1 st 2 nd 3 rd	GENERATION OF ELECTRICITY(CHAPTER 1) 1.1 Elementary idea on generation of electricity from Thermal, Hydro, Nuclear, Power station
2 nd (21.03.2022 to 26.03.2022)	1 st 2 nd 3 rd 4 th	1.2 Introduction to Solar Power Plant (Photovoltaic cells). 1.3 Layout diagram of generating stations TRANSMISSION OF ELECTRIC POWER(CHAPTER 2) 2.1 layout of transmission and distribution scheme
3 rd (28.03.2022 to 02.04.2022)	1 st 2 nd 3 rd	2.2 Voltage Regulation & efficiency of transmission. 2.3 State and explain Kelvin's law for economical size of conductor. 2.4 Corona and corona loss on transmission lines
4 th (04.04.2022 to 09.04.2022)	1 st 2 nd 3 rd	OVERHEAD LINE(CHAPTER 3) 3.1 Types of supports, size and spacing of conductor. 3.2 Types of conductor materials. 3.3 State types of insulator and cross arms
5 th (11.04.2022 to 16.04.2022)	1 st 2 nd 3 rd 4 th	3.4 Sag in overhead line with support at same level and different level. (effect of wind, ice, temperature on sag) 3.5 Simple problem on sag PERFORMANCE OF SHORT AND MEDIUM LINES(CH 4) 4.1 calculation of regulation

6 th (18.04.2022 to 23.04.2022)	1 st 2 nd 3 rd	4.1. Calculation of regulation and efficiency 4.1. Calculation of regulation and efficiency EHV TRANSMISSION(CHAPTER 5) 5.1 EHV ac transmission 5.1.1. Reasons for adoption of EHV AC transmission. 5.1.2. Problems involved in EHV transmission.
7 th (25.04.2022 to 30.04.2022)	1 st 2 nd 3 rd 4 th	5.2 HV DC transmission 5.2..1. Advantages and Limitations of HVDC transmission system DISTRIBUTION SYSTEM(CHAPTER 6) 6.1 introduction to distribution system 6.2 connection scheme of distribution system
8 th (02.05.2022 to 07.05.2022)	1 st 2 nd 3 rd 4 th	6.3 DC distributions. 6.3.1 Distributor fed at one End. 6.3.2 Distributor fed at both the ends. 6.3.3 Ring distributors. 6.4 AC distribution system. 6.4.1. Method of solving AC distribution problem. 6.4.2. Three phase four wire star connected system arrangement
9 th (09.05.2022 to 14.05.2022)	1 st 2 nd 3 rd	UNDERGROUND CABLE(CHAPTER 7) 7.1 Cable insulation and classification of cables. 7.2 Types of L. T. & H.T. cables with constructional features. 7.3 Methods of cable lying.
10 th (16.05.2022 to 21.05.2022)	1 st 2 nd 3 rd 4 th	7.4 Localization of cable faults: Murray and Varley loop test for short circuit fault / Earth fault. ECONOMIC EXPECT(CHAPTER 8) 8.1 cause of low power factor and method of improvement of power factor 8.2 factor effecting economic generation.

for

 9/3/22
 H.O.D (ELECTRICAL)

11 th (23.05.2022 to 28.05.2022)	1 st 2 nd 3 rd 4 th	8.2.1 Load curves. 8.2.2 Demand factor. 8.2.3 Maximum demand. 8.2.4 Load factor. 8.2.5 Diversity factor. 8.2.6 Plant capacity factor. 8.3 Peak load and Base load on power station
12 th (30.05.2022 to 04.06.2022)	1 st 2 nd 3 rd 4 th	TYPES OF TARRIF(CHAPTER 9) 9.1. Desirable characteristic of a tariff. 9.2. Explain flat rate, block rate, two part and maximum demand tariff. (Solve Problems SUBSTATION(CHAPTER 10) 10.1 Layout of LT
13 th (06.06.2022 to 10.06.2022)	1 st 2 nd 3 rd 4 th	10.1 Layout of LT, HT and EHT substation. 10.2 Earthing of Substation, transmission and distribution lines.

for *Abdul*
09/03/22
H.O.D (ELECT.)