LESSON PLAN

SUBJECT: TH-4(a).(BASIC ELECTRICAL)

CHAPTERWISE DISTRIBUTION OF PERIORDS

SLNO	NAME OF THE CHAPTER AS PER SYLLABUS	NO OF SYLLABUS AS PER SYLLABUS	NO OF PERIODS ACTUALLY NEEDED
1	Fundamentals	5	5
2	AC theory	8	8
3	Generation of electric power	3	3
4	Conversion of Electric Power	7	7
5	Wiring and Power Billing	4	4
6	Measuring Instrumrnt	3	3
	TOTAL	30	30

DISCIPLINE: EE/EEE	SEMESTER: 2ND	NAME OF THE TEACHING FACULTY:-Er NIRANJAN SAHU
Week	**Class Day**	**Theory / Practical Topics**
1st	1st	**1. FUNDAMENTALS**
	2nd	1.3 State Ohm's law and concept of resistance. 1.4 Relation of V, I & R in series circuit.
2nd	1st	1.5 Relation of V, I & R in parallel circuit. 1.6 Division of current in parallel circuit.
	2nd	1.7 Effect of power in series & parallel circuit
3rd	1st	11.8 Kirchhoff's Law. 1.9 Simple problems on Kirchhoff's law
	2nd	**A.C. THEORY** 2.1 Generation of alternating emf. 2.2 Difference between D.C. & A.C.
4th	1st	2.3 Define Amplitude, instantaneous value, cycle, Time period, frequency, phase angle, phase difference.
	2nd	2.4 State & Explain RMS value, Average value, Amplitude factor.
5th	1st	2.4 State & Explain Form factor with Simple problems.
	2nd	2.5 Represent AC values in phasor diagrams. 2.6 AC through pure resistance, inductance & capacitance
6th	1st	2.7 AC though RL, RC, RLC series circuits
	2nd	2.8 Simple problems on RL, RC & RLC series circuits

7th	1st	2.9 Concept of Power and Power factor 2.10 Impedance triangle and power triangle
	2nd	GENERATION OF ELECTRICAL POWER 3.1 Give elementary idea on generation of electricity from thermal power station with block diagram
8th	1st	Give elementary idea on generation of electricity from , hydro power station with block diagram
	2nd	Give elementary idea on generation of electricity from nuclear power station with block diagram
9th	1st	**4. CONVERSION OF ELECTRICAL ENERGY** 4.1 Introduction of DC machines. 4.2 Main parts of DC machines.
	2nd	4.3 Classification of DC generator
10th	1st	4.4 Classification of DC motor.
	2nd	4.5 Uses of different types of DC generators & motors. 4.6 Types and uses of single phase induction motors.
11th	1st	4.7 Concept of Lumen and details about different types of Lamps .
	2nd	4.8 Different types of Lamps (Filament, Fluorescent, LED bulb) its Construction and principle.
12th	1st	4.9 Star rating of home appliances (Terminology, Energy efficiency, Star rating Concept)
	2nd	**WIRING AND POWER BILLING** 5.1 Types of wiring for domestic installations.
13th	1st	5.2 Layout of household electrical wiring (single line diagram showing all the important component in the system).
	2nd	5.3 List out the basic protective devices used in house hold wiring.
14th	1st	5.4 Calculate energy consumed in a small electrical installation
	2nd	**MEASURING INSTRUMENTS** 6.1 Introduction to measuring instruments. 6.2 Torques in instruments.
15th	1st	6.3 Different uses of PMMC type of instruments (Ammeter & Voltmeter). 6.4 Different uses of MI type of instruments (Ammeter & Voltmeter).
	2nd	6.5 Draw the connection diagram of A.C/ D.C Ammeter, voltmeter, energy meter and wattmeter. (Single phase only).