NILASAILA INSTITUTE OF SCIENCE & TECHNOLOGY
SERGARH-756060, BALASORE (ODISHA)
(Approved by AICTE& affiliated to SCTE&VT, Odisha)

LESSON PLAN

SUBJECT: Th-4(A)(BASIC ELECTRICAL)

Name Of The Faculty :- Er. NIRANJAN SAHU
Branch :-EE/EEE **Semester :-**2ND
Session :- 2023-24 **Examination :-** 2024 (S)

CHAPTER WISE DISTRIBUTION OF PERIODS

Sl.No.	Name of the chapter as per the Syllabus	No. of Periods as per the 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 Period:	30	30

Discipline: EE/EEE ENGINEERING	Semester: 2ND	**Name of the Teaching Faculty:** Er. NIRANJAN SAHU
		SESSION : 2023-24 **EXAMINATION :** 2024 (S)
Week	**Class Day**	**Topics to be Covered**
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
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
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
	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 tomeasuringinstruments.
15th	**1st**	6.3 Different uses of PMMC type of instruments (Ammeter & Voltmeter).
	2nd	6.5 Draw the connection diagram of A.C/ D.C Ammeter, voltmeter, energy
16th	**1st**	REVISION
	2nd	REVISION
17th	**1st**	REVISION
	2nd	REVISION