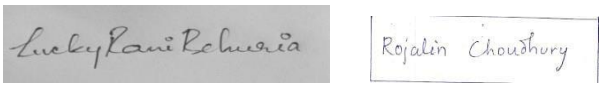
ACADEMIC LESSON PLAN WINTER 2022

Discipline: ELECTRICAL,ARCHITECTURE,ELECTRONICS,INFORMATION & TECHNOLOGY	Semester: 1st Sem (SECTION –**C,D,E,G**)	Name of the Teaching Faculty: **LUCKY RANI BEHURIA & ROJALIN CHOUDHURY**
Subject: BASIC ELECTRICAL ENGINEERING	No. of days/per week class allotted:2p /week	Semester From: 25TH October 2022 to 31st January 2023 No. of weeks:15 weeks
Week	Class Day	Theory Topics
1st	1st	1. FUNDAMENTALS: 1.1 Concept of current flow
	2nd	1.2 concept of source and load 1.2.1 concept of D.C source
2nd	1st	1.3 state Ohm's law 1.3.1 Resistance
	2nd	1.3.2 Series and parallel resistances 1.3.3 problems on series and parallel resistances
3rd	1st	1.4 Current and Voltage division in series and parallel circuits
	2nd	1.5 Kirchhoff's laws 1.5.1 problems on kirchhoff's laws
4th	1st	2 A.C THEORY 2.1 Concept of AC voltage and current
	2nd	2.2 Generation of alternating EMF
5th	1st	2.3. Difference between AC and DC 2.4. Define frequency, amplitude, time period, cycle, phase angle, phase difference
	2nd	2.5 Explanation of RMS value , instantaneous value, average value, amplitude factor, form factor(simple problems)
6th	1st	2.6 Representation of AC values in phasor diagrams.
	2nd	2.7. AC through pure resistance , inductance, capacitance
7th	1st	2.8. AC through RL,RC, & RLC circuits
	2nd	2.9. Problems on RL, RC,& RLC series circuits
8th	1st	2.10. concept of power and power factor
	2nd	2.11. Impedance triangle 2.11.1 Power triangle
9th	1st	3. GENERATION OF ELECTRICAL POWER 3.1 Introduction to different generating power plants
	2nd	3.2. Thermal power plants 3.2.1 layout of a thermal power plant(advantages and disadvantages)
10th	1st	3.3 Hydro power plant 3.3.1 layout of a Hydro power plant(advantages and disadvantages)
	2nd	3.4 Nuclear power plant(layout of nuclear power plant with advantages and disadvantages)
11th	1st	4. CONVERSION OF ELECTRIACAL ENERGY(Introduction to DC machines)
	2nd	4.1 main parts of DC machines(DC generator and DC motor)
12th	1st	4.2 Single phase induction motor(types) and concept of lumen
	2nd	4.3 different types of lamps, filaments, LED bulbs and their construction 4.4 star rating of home appliances(star rating concept, energy efficiency)
13th	1st	5. WIRING AND POWER BILLING: Types of wiring for domestic installations 5.1 single line diagram showing all the important components in the system
	2nd	5.2 list of protective devices used in household wiring 5.3 calculation of energy consumed.
14th	1st	6. MEASURING INSTRUMENTS: introduction to measuring instruments
	2nd	6.1 Torques in measurements 6.2 Different use of PMMC type of instruments(voltmeter and ammeter)
15th	1st	6.3 different usage of MI type of instruments(voltmeter and ammeter)

	2nd	6.4 Draw the connection diagram of A.C/D.C ammeter, voltmeter energy meter and wattmeter(single phase only).



Signature of Teaching Faculty