ACADEMIC LESSON PLAN OF SUMMER 2023

Discipline: CIVIL (SECTION – B)	Semester: 1st Sem	Name of the Teaching Faculty: ROJALIN CHOUDHURY
Subject: BASIC ELECTRICAL ENGINEERING	No. of days/per week class allotted:2p/week	Semester From:20/03/2023 TO 27/06/2023 No. of weeks:15 weeks
Week	Class Day	Theory Topics
1st	1	1. FUNDAMENTALS: 1.1 Concept of current flow
	2	1.2 concept of source and load 1.2.1 concept of D.C source
2nd	1	1.3 state Ohm's law 1.3.1 Resistance
	2	1.3.2 Series and parallel resistances 1.3.3 problems on series and parallel resistances
3rd	1	1.4 Current and Voltage division in series and parallel circuits
	2	1.5 Kirchhoff's laws 1.5.1 problems on kirchhoff's laws
4th	1	2 A.C THEORY 2.1 Concept of AC voltage and current
	2	2.2 Generation of alternating EMF
5th	1	2.3. Difference between AC and DC 2.4. Define frequency, amplitude, time period, cycle, phase angle, phase difference
	2	2.5 Explanation of RMS value , instantaneous value, average value, amplitude factor, form factor(simple problems)
6th	1	2.6 Representation of AC values in phasor diagrams.
	2	2.7. AC through pure resistance , inductance, capacitance
7th	1	2.8. AC through RL,RC, & RLC circuits
	2	2.9. Problems on RL, RC,& RLC series circuits
8th	1	2.10. concept of power and power factor
	2	2.11. Impedance triangle 2.11.1 Power triangle
9th	1	3. GENERATION OF ELECTRICAL POWER 3.1 Introduction to different generating power plants
	2	3.2. Thermal power plants 3.2.1 layout of a thermal power plant(advantages and disadvantages)
10th	1	3.3 Hydro power plant 3.3.1 layout of a Hydro power plant(advantages and disadvantages)
	2	3.4 Nuclear power plant(layout of nuclear power plant with advantages and disadvantages)
11th	1	4. CONVERSION OF ELECTRIACAL ENERGY(Introduction to DC machines)
	2	4.1 main parts of DC machines(DC generator and DC motor)
12th	1	4.2 Single phase induction motor(types) and concept of lumen
	2	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	1	5. WIRING AND POWER BILLING: Types of wiring for domestic installations 5.1 single line diagram showing all the important components in the system
	2	5.2 list of protective devices used in household wiring 5.3 calculation of energy consumed.
14th	1	6. MEASURING INSTRUMENTS: introduction to measuring instruments
	2	6.1 Torques in measurements 6.2 Different use of PMMC type of instruments(voltmeter and ammeter)
15th	1	6.3 different usage of MI type of instruments(voltmeter and ammeter)

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

Rojalin Choudhury

Signature of the Faculty