

DISCIPLINE: ELECTRICAL ENGINEERING		SEMESTER: IST	NAME OF THE TEACHING FACULTY: RAJIV RATAN PATEL
SUBJECT: BASIC ELECTRICAL ENGINEERING		NO OF DAYS/PER WEEK CLASS ALLOTTED:	SEMESTER FROM DATE: 25/10/2022 TO DATE:20/02/2023 NO OF WEEKS:15
WEEK		CLASS DAY	PRACTICAL TOPICS
1st	1st	Concept of current flow. Concept of source and load	
	2nd	State Ohm's law and concept of resistance.	
2nd	1st	Relation of V, I & R in series circuit Relation of V, I & R in parallel circuit Division of current in parallel circuit.	
	2nd	Effect of power in series & parallel circuit. Kirchhoff's Law. Simple problems on Kirchhoff's law	
3rd	1st	Generation of alternating emf Difference between D.C. & A.C. Define Amplitude, instantaneous value, cycle, Time period, frequency, phase angle, phase difference	
	2nd	State & Explain RMS value, Average value, Amplitude factor & Form factor with Simple problems	
4th	1st	Represent AC values in phasor diagrams. AC through pure resistance,	
	2nd	AC through PURE inductance & capacitance	
5th	1st	AC through RL, RC, RLC series circuits	
	2nd	Simple problems on RL, RC & RLC series circuits	
6th	1st	Concept of Power and Power factor Impedance triangle and power triangle	
	2nd	elementary idea on generation of electricity from thermal power station	
7th	1st	elementary idea on generation of electricity from Nuclear power station	
	2nd	elementary idea on generation of electricity from hydro power station	
8th	1st	CONVERSION OF ELECTRICAL ENERGY Introduction of DC machines. Main parts of DC machines	
	2nd	Principle of operation of DC generator EMF equation of generator and simple problem	
9th	1st	Classification of DC generator Principle of operation of DC motor.	
	2nd	Classification of DC motor. Uses of different types of DC generators & motors	
10th	1st	Types and uses of single phase induction motors. Types and uses of 3-phase induction motors	
	2nd	Concept of transformer & its applications	
11th	1st	Types of wiring for domestic installations Layout of household electrical wiring (single line diagram showing all the important component in the system).	
	2nd	List out the basic protective devices used in house hold wiring. Calculate energy consumed in a small electrical installation	
	1st	Introduction to measuring instruments. Torques in instruments Different uses of PMMC type of instruments (Ammeter & Voltmeter).	

12th	2nd	Different uses of MI type of instruments (Ammeter & Voltmeter). Draw the connection diagram of A.C/ D.C Ammeter, voltmeter, energy meter and wattmeter. (Single phase only).
	1st	Concept of Lumen
13th	2nd	Different types of Lamps (Filament, fluorescent, Mercury Vapour, Sodium Vapour, Neon, LED bulb) its Construction and Principle
	1st	Star rating of home appliances (Terminology, Energy efficiency, Star rating Concept)
14th	2nd	REVISION
	1st	REVISION
15th	2nd	REVISION