

DISCIPLINE: ELECTRICAL ENGINEERING		SEMESTER: 1ST	NAME OF THE TEACHING FACULTY: RAJIV RATAN PATEL
SUBJECT: BASIC ELECTRICAL ENGINEERING		DAYS/PER WEEK CLASS ALLOTTED:	SEMESTER FROM DATE: 16/08/2023 TO DATE: 11/12/2023 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

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		Introduction to measuring instruments.
	1st	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

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