UTKAL INSTITUTE OF ENGINEERING & TECHNOLOGY

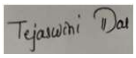
DISCIPLINE: All Branch	SEMESTER: 1st Sem	NAME OF THE TEACHING FACULTY: Er. Kalakar mohanty
SUBJECT: BASIC ELECTRICAL ENGINEERING	No of Days/Per week class allotted: **4** Class P/W**(60)**	Semester From Date:25/10/2022 To Date:31/01/2023 No. Of Weeks: **15**

WEEK	CLASS DAY	THEORY TOPICS	REMARKS	
1st	1st	1. FUNDAMENTALS	Date	Dean/Principal
	2nd	1.1 Concept of current flow.		
	3rd	1.2 Concept of source and load.		
	4th	1.3 State Ohm's law and concept of resistance.		
2nd	1st	1.4 Relation of V, I & R in series circuit		
	2nd	1.5 Relation of V, I & R in parallel circuit.		
	3rd	1.6 Division of current in parallel circuit.		
	4th	1.7 Effect of power in series & parallel circuit.		
3rd	1st	1.8 Kirchhoff's Law		
	2nd	1.9 Simple problems on Kirchhoff's law.		
	3rd	2. A.C. THEORY		
	4th	2.1 Generation of alternating emf.		
4th	1st	2.2 Difference between D.C. & A.C		
	2nd	2.3 Define Amplitude, instantaneous value, cycle, Time period, frequency, phase angle, phase difference.		

	3rd	2.4 State & Explain RMS value, Average value, Amplitude factor & Form factor with Simple problems.		
	4th	2.5 Represent AC values in phasor diagrams.		
5th	1st	Assignment		
	2nd	2.6 AC through pure resistance, inductance & capacitance		
	3rd	Assignment question Discussion		
	4th	2.7 AC though RL, RC, RLC series circuits.		
6th	1st	Class test		
	2nd	2.8 Simple problems on RL, RC & RLC series circuits		
	3rd	2.9 Concept of Power and Power factor		
	4th	Assignment		
7th	1st	2.10 Impedance triangle and power triangle.		
	2nd	Doubt Clear Class		
	3rd	3. GENERATION OF ELECTRICAL POWER		
	4th	Assignment		
8th	1st	Assignment question Discussion		
	2nd	of electricity from thermal , hydro & nuclear power station with block		
	3rd	4. CONVERSION OF ELECTRICAL ENERGY		
	4th	(No operation, Derivation, numerical problems)		
9th	1st	4.2 Main parts of DC machines.		
	2nd	4.3 Classification of DC generator		
	3rd	4.4 Classification of DC motor		
	4th	4.5 Uses of different types of DC generators & motors.		
10th	1st	4.6 Types and uses of single phase induction motors.		
	2nd	4.7 Concept of Lumen		

	3rd	Doubt clear class		
	4th	4.8 Different types of Lamps (Filament, Fluorescent, LED bulb) its Construction and Principle.		
11th	1st	Doubt Clear Class		
	2nd	Aliphatic and Aromatic Hydrocarbons (Huckle's rule only). Difference between Aliphatic and aromatic hydrocarbons		
	3rd	4.9 Star rating of home appliances (Terminology, Energy efficiency, Star rating Concept)		
	4th	5. WIRING AND POWER BILLING		
12th	1st	5.1 Types of wiring for domestic installations.		
	2nd	wiring (single line diagram showing all the important component in the		
	3rd	5.3 List out the basic protective devices used in house hold wiring.		
	4th	Last Class Discussion		
13th	1st	5.4 Calculate energy consumed in a small electrical installation		
	2nd	6. MEASURING INSTRUMENTS		
	3rd	6.1 Introduction to measuring instruments.		
	4th	6.2 Torques in instruments.		
	1st	6.3 Different uses of PMMC type of instruments (Ammeter & Voltmeter).		

14th	2nd	Assignment		
	3rd	Doubt clear class		
	4th	6.1 Introduction to measuring instruments.		
15th	1st	6.4 Different uses of MI type of instruments (Ammeter & Voltmeter)		
	2nd	5 Draw the connection diagram of A.C/ D.C Ammeter, voltmeter, energy meter and wattmeter. (Single phase only).		
	3rd	internal question discussion		
	4th	Doubt Clear Class		



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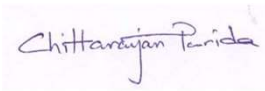

DEAN

PRINCIPAL