

Discipline: Mechanical		Semester: 4th Sem.	Name of the Teaching Faculty	
Subject: Electrical Technology.		No of Days/Week Class Allotted: _____	Semester From date: _____ To date _____	No. of Weeks: _____
WEEK	Class Day	Theory Topics		
01	1st	<u>Unit-1</u> :- Introduction to Electrical power supply System generation.		
	2nd	Electrical power supply system transmission, distribution and utilization.		
	3rd	AC Supply :- what is AC supply, working principle.		
	4th	DC Supply :- what is DC supply, working principle.		
	5th			
02	1st	<u>Unit-2</u> :- <u>Three phase supply</u> :- what is three phase supply and, introduction about it		
	2nd	About star circuit, About delta circuit		
	3rd	About line & phase relationship.		
	4th	what is power equation briefly describe		
	5th			
03	1st	Numerical Problems on power equation.		
	2nd	<u>Unit-3</u> :- <u>Measuring Instrument</u> : Introduction to Construction		
	3rd	operation and use of AC ammeter.		
	4th	operation and use of DC ammeter.		
	5th			

Theory Topics

WEEK	Class Day	Theory Topics
04	1st	About Voltmeter, How the Voltmeter operate.
	2nd	About electrodynamic watt meter & its use
	3rd	About Electric energy meter & digital multimeter.
	4th	function of energy meter & digital multimeter & their uses.
	5th	
05	1st	About clip on meter & How the clip on meter operate.
	2nd	<u>Class test - I</u>
	3rd	Doubt clearing classes regarding class test.
	4th	<u>Unit-4 :- DC Motor :-</u> Construction and principle of operation
	5th	
06	1st	Continuing on DC motor's Construction & working principle.
	2nd	Speed & torque characteristics.
	3rd	Types of DC Motors, their specification, rating & Application.
	4th	Continuing types of DC Motors, their specification, rating & Application
	5th	

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WEEK	Class Day	Theory Topics
07	1st	What is insulation mean in a DC motor. types of insulation.
	2nd	Types of insulation used in a DC motors
	3rd	Numerical problem regarding this insulation used in a DC motor.
	4th	<u>Unit-5</u> :- <u>AC Machines</u> :- Transformer Introduction & why need this.
	5th	
08	1st	Construction & principle of operation of Transformer.
	2nd	Emf equation & transformation ratio of a Transformer.
	3rd	Load test, efficiency and regulation of a Transformer.
	4th	Specification & rating of a Transformer with neat sketch.
	5th	
09	1st	Auto-transformer :- Introduction & How it is used, working principle
	2nd	Three phase transformer :- Introduction & working principle & their uses.
	3rd	Application of transformer
	4th	Numerical Problem on transformer.
	5th	

Theory Topics

WEEK	Class Day	Theory Topics
10	1st	<u>Unit-6 :- AC Motor</u> :- Introduction of an AC Motor.
	2nd	Construction & working principle of an AC Motor.
	3rd	Construction & working, principle of operation of 3-phase induction motor.
	4th	Speed torque characteristics & Slip was principle operation
	5th	
11	1st	Speed control (V/f), reversal of rotation & starters principle operation.
	2nd	What is single phase motor, Universal motor & Stepper motor? working principles of its
	3rd	What is servo motor & its working principles & ratings of all type motors.
	4th	Applications of these motors in various fields.
	5th	
12	1st	<u>Unit-7 :- Alternator</u> :- Introduction about this.
	2nd	Construction, principles of operation & Applications of an alternator with sketch.
	3rd	Self and separate excitation
	4th	<u>Synchronous Motors</u> :- Introduction of this motor.
	5th	

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 WEEK

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WEEK	Class Day	Theory Topics
13	1st	Construction, principle of operation of a Synchronous Motor with neat sketch.
	2nd	Methods of Starting & applications of Synchronous motor.
	3rd	Numerical Problem on ϕ (Synchronous Motors)
	4th	<u>Class test - II</u>
	5th	
14	1st	Doubt clearing class & discussion with students regarding class test - II
	2nd	<u>Unit - 8</u> :- <u>Industrial applications</u> :- classification of drives, ϕ
	3rd	factors for selection of motor for different drives, Enclosures and Mountings
	4th	<u>Unit - 9</u> :- <u>Electric heating & welding</u> :- Introduction regarding these process.
	5th	
15	1st	Working Principle & types Selection of the system, Specifications & rating
	2nd	<u>Unit - 10</u> :- <u>Electrometallurgical and electro Agro system</u> :- Introduction & Concept
	3rd	Working principle used in electroplating Electrical machine in electro-agro system (Purification pump).
	4th	Previous Year Question Discussion & Doubt clearing classes.
	5th	