

Lesson Plan

Name of Faculty : Mr. Pardeep Kumar
 Discipline : ELECTRICAL ENGG.
 Semester : 6th
 Subject : ECA
 Lesson Plan Duration : 15 Weeks (From : 20-01-2025 toApril, 2025)

Week	Theory		Practical
	Lecture Day	Topic	Topic
1 st	1 st	UNIT I Fundamentals of Energy Conservation Energy Scenario: Primary and Secondary Energy, Energy demand and supply	Identify star labelled electrical apparatus and compare the data for various star ratings.
	2 nd	Introduction to Energy conservation, energy management , energy efficiency and its need	
2 nd	3 rd	Bureau of Energy efficiency (BEE) and its Roles	
	4 th	Star Labelling: Need and its benefits.	
3 rd	5 th	UNIT II Energy Conservation in Electrical Installation Systems General energy saving tips in Lighting system	Study of various instrument used for energy audit
	6 th	Energy efficiency measures in fans , water pumps,	Determine the reduction in power consumption by replacement of lighting system in a class room / laboratory.
4 th	7 th	Room Air Conditioners,	
	8 th	Refrigerators, Heaters,	
5 th	9 th	Blowers , Washing Machines etc	Revision and File Checking
	10 th	Energy conservation in Electricity Bill: concept of Electricity billing,	
6 th	11 th	Maximum Demand Controller kVAR Controller	Prepare a technical report on energy conservation act 2003
	12 th	Maximum demand controllers; Automatic power factor controllers (APFC)	
7 th	13 th	Revision Unit-2	
	14 th	UNIT 3 Energy Conservation in Electrical Machines, General energy saving tips for transformer and AC/DC motor	
8 th	15 th	Energy efficient motor; significant features, advantages, applications and limitations	Revision and File Checking
	16 th	Energy efficient transformers, amorphous transformers;	

9th	17th	Epoxy Resin cast transformer / Dry type of transformer.	Prepare a technical report on Energy Conservation Building Code (ECBC)
	18th	Energy saving factors for the selection of DG system.	
10th	19th	Revision Unit-3	
	20th	UNIT IV Energy Audit of Electrical System Energy audit : Definition, and Need of energy audit	
11th	21st	Types of Energy audit and Instruments used for energy audit	Studying the various energy conservation methods useful in power generation, transmission and distribution
	22nd	Roles and responsibilities of energy Manager and Accountability.	
12th	23rd	Energy Audit procedure: Techniques involved in conducting energy audits, including data collection, analysis, and evaluation of energy consumption patterns.	
	24th	Revision Unit-4	
13th	25th	UNIT V Energy Conservation Act Energy conservation Act 2001: Objectives, features and its amendments.	Visit an industry and studying various energy management systems in an industry. Further identify the various energy conservation methods useful in a particular industry
	26th	Salient features of Energy Conservation Building Code (ECBC): Building Envelope	
14th	27th	Comfort System and Controls, Lighting & Controls and Electrical & Renewable Energy Systems.	Revision and File Checking
	28th	Salient features of Eco Niwas Samhita Code (ENS)	
15th	29th	Revision of old paper	
	30th	Revision of old paper	