

LESSON PLAN

Semester: 2ND	Year: 1ST	Course:
Branch : EEE	Sub: BASIC ELECTRICAL ENGINEERING	Total Cr
	Sub Code : 23ES1001	
Name of the Faculty:	AMIT KUMAR MEHER	
Designation :	LECTURER	
Department :	ELECTRICAL AND ELECTRONICS ENGINEERING	
Session	2024-25	
Recommended Books	<u>Text book:</u>	
	1. Principles and Applications of Electrical Engineering By G. Rizzoni	
	2. Basic Electrical Engineering By Nagrath I.J. and D. P. Kothari	
	<u>Reference Books:</u>	
	1. Problems in Electrical Engineering By S. Parker Smith	
	2. Electrical & Electronics Technology By Edward Hughes (revised by Ian M	
Sl. No.	Lecture No.	Topics to be covered

MODULE-1

1	Lecture-01	D.C Networks: Kirchoff's laws, node voltage and mesh current methods
2	Lecture-02	Delta-star and star-delta conversions
3	Lecture-03	Superposition principle
4	Lecture-04	Thevenin's theorems
5	Lecture-05	Norton's theorems
6	Lecture-06	Maximum Power Transfer Theorem

MODULE-2

7	Lecture-07	Single phase and three phase ac circuit: Average and effective values of sinusoids
8	Lecture-08	Solution of R, L, C series circuits,
9	Lecture-09	Solution of series and parallel circuits, series -parallel resonance
10	Lecture-10	Line and phase quantities
11	Lecture-11	Delta and star connections, solution of the balanced three phase circuits
12	Lecture-12	Measurement of power in three phase circuits.

MODULE-3		
13	Lecture-13	Magnet circuit & principle of electromechanical energy conversion
14	Lecture-14	Review of fundamental laws of electromagnetic induction
15	Lecture-15	Solution of simple magnetic circuits
16	Lecture-16	DC machine: Construction, types, emf equation of generator
17	Lecture-17	Torque equation of motor
18	Lecture-18	speed control of DC motors
MODULE-4		
19	Lecture-19	AC MACHINES: Single Phase Transformer: Construction, emf equation
20	Lecture-20	No load and load operation,
21	Lecture-21	Voltage regulation and efficiency
22	Lecture-22	Three Phase Induction Motor: Construction, principle of working,
23	Lecture-23	concept of slip, torque speed relation
24	Lecture-24	Principle of operation of Three Phase alternator.
MODULE-5		
25	Lecture-25	Introduction to Power System
26	Lecture-26	General structure of electrical power systems
27	Lecture-27	Concepts of Generation
28	Lecture-28	Transmission
29	Lecture-29	Distribution
30	Lecture-30	Sources of Electrical Power

Signature of Faculty Member

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