

PANIPAT INSTITUTE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF APPLIED SCIENCES & HUMANITIES

LESSON PLAN

Name: - Mr. Rajeev Saini

Subject Name: - Basic Electrical engineering

Semester/Session: -2nd Sem. (Session 2022-23)

Subject Code: - ES-101A

Sr. No	Lecture No.	Description of Topic	Tentative date	Methodology	CO
1	L1	Discussion about subject, Course outcomes and Exam pattern	14-02-2023	Discussion with Students	CO1
2	L2	Unit-1: Some Basic Definitions, Ohm's Law, Series and Parallel Circuits	15-02-2023	Lecture	
3	L3	Numerical based on ohms law, series and parallel circuits	16-02-2023	Lecture	
4	L4	KVL, KCL and its numerical, Terms used in network terminology, Circuit elements classification	17-02-2023	Lecture	
5	L5	Mesh analysis of resistive circuit	28-02-2023	Lecture	
6	L6	Numericals on Mesh analysis of resistive circuit	01-03-2023	Lecture	
7	L7	Node Voltage analysis of Circuits	02-03-2023	Lecture	
8	L8	Numericals on Node Voltage analysis of Circuits	03-03-2023	Lecture	
9	L9	Concept of Super Mesh & Super Node	09-03-2023	Lecture	
10	L10	Star Delta transformation derivation	10-03-2023	Lecture	
11	L11	Numericals on Star Delta transformation	14-03-2023	Lecture	
12	L12	Superposition theorem	15-03-2023	Lecture	
13	L13	Numericals on Superposition theorem	16-03-2023	Lecture	
14	L14	Thevenin's Theorem and its numericals	17-03-2023	Lecture	
15	L15	Norton's Theorem and its numericals	21-03-2023	Lecture	
16	L16	Maximum Power Transfer Theorem and its numericals	22-03-2023	Lecture	

17	L17	Revision of Unit 1	23-03-2023	Flip Learning	
18	L18	Unit 2: AC Fundamentals: Introduction and Some definitions, Generation of AC quantities, EMF equation of AC quantities	24-03-2023	Using animated video	CO2
19	L19	Peak value and Average value, RMS value of alternating quantity	31-03-2023	Lecture	
20	L20	Numerical on Phasor addition and subtraction	04-04-2023	Lecture	
21	L21	Mathematical representations of Phasors	05-04-2023	Lecture	
22	L22	AC circuits with pure Resistor, Inductor, Pure capacitor	06-04-2023	Lecture	
23	L23	RL series combination, RC series circuits	07-04-2023	Lecture	
24	L24	RLC Series Circuits and Series resonance	11-04-2023	Lecture	
25	L25	Series RLC Circuit design using Multisim/ECS	12-04-2023	Using Multisim/ECS software	
26	L26	AC parallel circuits, phasor method	13-04-2023	Flip Learning	
27	L27	J- method for solving parallel circuits	14-04-2023	Lecture	
28	L28	Test of unit 2	18-04-2023	Lecture	
29	L29	Unit 3: Introduction to three phase circuits	19-04-2023	Lecture	CO3
30	L30	Generation of alternating 3- phase emf, Phase sequence and its importance	20-04-2023	Lecture	
31	L31	Voltage and current relations in star connections	21-04-2023	Lecture	
32	L32	Voltage and current relations in delta connections	25-04-2023	Lecture	
33	L33	Measurement of 3-phase power by two wattmeter method for various types of star connected balanced loads.	26-04-2023	Lecture	
34	L34	Measurement of 3-phase power by two wattmeter method for various types of delta connected balanced loads.	27-04-2023	Lecture	
35	L35	Introduction to magnetic circuits	28-04-2023	Lecture and discussion with students	

36	L36	Single Phase Transformer: Principle, construction	02-05-2023	Lecture	CO4
37	L37	Emf equation, Ideal transformer, Transformer at no load	03-05-2023	Lecture	
38	L38	Phasor diagram at on load conditions	04-05-2023	Lecture	
39	L39	Losses & Efficiency, regulation, Concept of auto transformer	09-05-2023	Lecture	
40	L40	OC & SC test, equivalent circuit	10-05-2023	Lecture	
41	L41	Revision of unit 3	11-05-2023	Lecture	
42	L42	Unit 4: Electrical Machines: Introduction, Construction of DC machine	12-05-2023	Power Point Presentation	
43	L43	Working of dc machine with commutator action, Speed control of dc shunt motor	16-05-2023	Power Point Presentation	
44	L44	Construction and working of a three-phase induction motor	17-05-2023	Lecture	
45	L45	Generation of rotating magnetic fields, Significance of torque-slip characteristic	18-05-2023	Lecture	
46	L46	Significance of torque-slip characteristic	19-05-2023	Lecture	
47	L47	Basics of Single-phase induction motor,	23-05-2023	Lecture	
48	L48	Capacitor start capacitor run Single-phase induction motor working	24-05-2023	Flip Learning	
49	L49	Basic construction and working of synchronous generator and motor	25-05-2023	Lecture	
50	L50	Electrical Installations: Switch Fuse Unit (SFU), MCB, ELCB, MCCB	26-05-2023	Lecture	
51	L51	Types of Wires and Cables, Earthing	30-05-2023	Lecture	
52	L52	Test of Unit-4	31-05-2023	Lecture	

***Highlighted part represents Content beyond Syllabus topics**