

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

LESSON PLAN

Name: - Mr. Yeeshu Ralhen

Subject Name: - Basic Electrical engineering

Semester/Session: -1st 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	07-10-2022	Discussion with Students	CO1
2	L2	Unit-1: Some Basic Definitions, Ohm's Law, Series and Parallel Circuits	10-10-2022	Lecture	
3	L3	Numerical based on ohms law, series and parallel circuits	11-10-2022	Lecture	
4	L4	KVL, KCL and its numerical, Terms used in network terminology, Circuit elements classification	12-10-2022	Lecture	
5	L5	Mesh analysis of resistive circuit	14-10-2022	Lecture	
6	L6	Numericals on Mesh analysis of resistive circuit	17-10-2022	Lecture	
7	L7	Node Voltage analysis of Circuits	18-10-2022	Lecture	
8	L8	Numericals on Node Voltage analysis of Circuits	19-10-2022	Lecture	
9	L9	Concept of Super Mesh & Super Node	21-10-2022	Lecture	
10	L10	Star Delta transformation derivation	28-10-2022	Lecture	
11	L11	Numericals on Star Delta transformation	31-10-2022	Lecture	
12	L12	Superposition theorem	01-11-2022	Lecture	
13	L13	Numericals on Superposition theorem	02-11-2022	Lecture	
14	L14	Thevenin's Theorem and its numericals	04-11-2022	Lecture	
15	L15	Norton's Theorem and its numericals	07-11-2022	Lecture	

16	L16	Maximum Power Transfer Theorem and its numericals	08-11-2022	Lecture	CO2	
17	L17	Revision of Unit 1	09-11-2022	Flip Learning		
18	L18	Unit 2: AC Fundamentals: Introduction and Some definitions, Generation of AC quantities, EMF equation of AC quantities	11-11-2022	Using animated video		
19	L19	Peak value and Average value, RMS value of alternating quantity	18-11-2022	Lecture		
20	L20	Numerical on Phasor addition and subtraction	21-11-2022	Lecture		
21	L21	Mathematical representations of Phasors	22-11-2022	Lecture		
22	L22	AC circuits with pure Resistor, Inductor, Pure capacitor	23-11-2022	Lecture		
23	L23	RL series combination, RC series circuits	25-11-2022	Lecture		
24	L24	RLC Series Circuits and Series resonance	28-11-2022	Lecture		
25	L25	Series RLC Circuit design using Multisim/ECS	29-11-2022	Using Multisim/ECS software		
26	L26	AC parallel circuits, phasor method	30-11-2022	Flip Learning		
27	L27	J- method for solving parallel circuits	02-12-2022	Lecture		
28	L28	Test of unit 2	05-12-2022	Lecture		
29	L29	Unit 3: Introduction to three phase circuits	06-12-2022	Lecture		CO3
30	L30	Generation of alternating 3- phase emf, Phase sequence and its importance	07-12-2022	Lecture		
31	L31	Voltage and current relations in star connections	09-12-2022	Lecture		
32	L32	Voltage and current relations in delta connections	12-12-2022	Lecture		
33	L33	Measurement of 3-phase power by two wattmeter method for various types of star connected balanced loads.	13-12-2022	Lecture		
34	L34	Measurement of 3-phase power by two wattmeter method for various types of delta connected balanced loads.	19-12-2022	Lecture		

35	L35	Introduction to magnetic circuits	20-12-2022	Lecture and discussion with students	
36	L36	Single Phase Transformer: Principle, construction	21-12-2022	Lecture	
37	L37	Emf equation, Ideal transformer, Transformer at no load	23-12-2022	Lecture	
38	L38	Phasor diagram at on load conditions	26-12-2022	Lecture	
39	L39	Losses & Efficiency, regulation, Concept of auto transformer	27-12-2022	Lecture	
40	L40	OC & SC test, equivalent circuit	28-12-2022	Lecture	
41	L41	Revision of unit 3	30-12-2022	Lecture	
42	L42	Unit 4: Electrical Machines: Introduction, Construction of DC machine	02-01-2023	Power Point Presentation	CO4
43	L43	Working of dc machine with commutator action, Speed control of dc shunt motor	03-01-2023	Power Point Presentation	
44	L44	Construction and working of a three-phase induction motor	04-01-2023	Lecture	
45	L45	Generation of rotating magnetic fields, Significance of torque-slip characteristic	06-01-2023	Lecture	
46	L46	Basics of Single-phase induction motor, Capacitor start capacitor run Single-phase induction motor working	09-01-2023	Lecture	
47	L47	Basic construction and working of synchronous generator and motor	10-01-2023	Lecture	
48	L48	Electrical Installations: Switch Fuse Unit (SFU), MCB, ELCB, MCCB	11-01-2023	Flip Learning	
49	L49	Types of Wires and Cables, Earthing	13-01-2023	Lecture	

*Highlighted part represents Content beyond Syllabus topics