

Lesson Plan

Name of Teacher: Parveen Sharma
 Class: B.Tech 1st Year Sem: Second
 Deptt.: Electrical Engg.

Designation: Assistant Professor
 Subject: Electrical Technology
 For the Session: 2017-2018

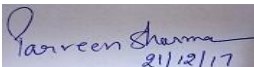
Month	Class	Topic/Chapters Covered	Academic Activity	Test/ Assignment
January(8-9)	2	Ohm's Law, junction & node, circuit elements classification: Linear & nonlinear, active & passive, lumped & distributed, unilateral & bilateral with examples.		
January(10-12)	3	KVL, KCL, Loop analysis of resistive circuit in the context of dc voltages & currents, Node-voltage analysis of resistive circuit in the context of dc voltages & currents.		
January(15-16)	2	Star-Delta transformation for set of pure resistors. Relevant D.C. circuit analytical problems for quantitative analysis.		
January(17-19)	3	Superposition, Thevenin's and Norton's theorems all in the context of dc voltage and current sources acting in a resistive network.		
January(23-25)	3	Maximum power transfer theorem, Relevant D.C. circuit analytical problems for quantitative analysis.		
January(29-31)				Test-I
February(1-2)	2	Mathematical representation of various wave functions. Sinusoidal periodic signal, instantaneous & peak values, polar & rectangular form representation of impedances & phasor quantities.		
February(5-7)	3	Addition & subtraction of two or more phasor sinusoidal quantities using component resolution method.		
February(8-9)			Cultural & Sports	
February(14-16)	3	RMS & average values of various waveforms including clipped, clamped, half wave rectified & full wave rectified sinusoidal periodic Waveforms etc. Generation of alternating emf (dynamo). Relevant analytical problems for quantitative analysis.		
February(19-22)	4	Behavior of various components fed by A.C. source. (steady state response of pure R, pure L, pure C, RL, RC, RLC series with waveforms of instantaneous voltage, current & power on simultaneous real axis scale and corresponding phasor diagrams		
February(23)	1	P.F.active, reactive & apparent power.		
February (26-28)				Test-II
March(5-8)	4	Frequency response of Series & Parallel RLC circuit including resonance, Q factor, cut-off frequency & bandwidth.		
March(9)	1	Relevant A.C.circuit analytical problems solutions using 'j-omega' operator method.		
March(12-14)	3	Necessity & advantage of three phase system, mode of generation of 3 phase supply. Phase and line voltages & currents, power.		
March(15-16)	2	Measurement of 3-phase power by two wattmeter method for various types of star & delta connected balanced resistive, inductive & capacitive loads including phasor diagrams at various power factors.		
March(19-20)	2	Phase sequence significance. Relevant problems for quantitative analysis.		
March(21-23)				Test-III
March(26-28)	3	Laws of EMI, statically & dynamically induced emf, self & mutual induction, dot notation, RH Screw rule, Fleming's RH & LH rules. MMF, Relation between magnetic flux, m.m.f. and reluctance, magnetic fringing. Hysteresis & Eddy current losses & their minimization.		

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Name of Institute: Galaxy Global Educational Trust's Group of Institutions, Dinarpur, Ambala

March(29-30)	2	Principle, construction & emf equation. Phasor diagram for ideal case and at no load. Winding resistance & leakage reactance.		
April(2-3)	2	Actual transformer at resistive, inductive & capacitive loads with phasor diagrams. Losses & Efficiency, condition of maximum efficiency, regulation.		
April(4-6)	3	OC & SC test, direct load test, equivalent circuit, concept of auto transformer. Prime mover, Stator-Rotor, Field-Armature, necessity of a starter. D.C. Machines: Principle, general construction & working.		
April(9-11)	3	Split ring /Commutator working in DC generator & motor Generated emf equation, Torque Equation. Types of DC Machines, speed control of DC Shunt motor.		
April(12-13)	2	Concept of rotating magnetic field, principle, types, general construction and working. Concept of slip & its significance.		
April(16-18)	3	Synchronous Generator (alternator): Principle, general construction & working. Synchronous motor: Principle, general construction & working.		
April(19-21)		Session End		Test-IV



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