GOVT. POLYTECHNIC MAYURBHANJ LESSON PLAN 2024-2025

Discipline : ELECTRICAL ENGG.		Semester: 3th Sem		Name of the Teaching Faculty : Hemanta Sethi	
Subject : CNT		No. of Days / per week class allotted : 05		Semester From date : 04.07.2024	To Date : 08.11.2024

MONTH	Week	Day	UNIT	Topics	
JULY			UNIT-1	**1. MAGNETIC CIRCUITS**	
	1ST	4TH		Introduction	
		6TH		Magnetizing force, Intensity, MMF, flux and their relations	
	2ND	1ST		Permeability, reluctance and permeance	
		2ND		Analogy between electric and Magnetic Circuits	
		3RD		B-H Curve	
		4TH		Series & parallel magnetic circuit.	
		6TH		Hysteresis loop	
			UNIT-II	**COUPLED CIRCUITS:**	
	3RD	1ST		Introduction, Self inductance	
		2ND		Self Inductance and Mutual Inductance	
		3RD		Conductively coupled circuit and mutual impedance	
		4TH		Dot convention	
		6TH		Coefficient of coupling	
	4TH	1ST		Series and parallel connection of coupled inductors.	
		2ND		solved problems	
		3RD		Solve numerical problems	
			UNIT-III	**CIRCUIT ELEMENTS AND ANALYSIS:**	
		4TH		Active and passive elements	
		6TH		Active, Passive, Unilateral & bilateral, Linear & Non linear elements	
	5TH	1ST		Mesh Analysis, Mesh Equations by inspection	
		2ND		Super mesh Analysis	
		3RD		**CLASS TEST-1**	
	1ST	4TH		Nodal Analysis, Nodal Equations by inspection	
		6TH		Super node Analysis.	
	2ND	1ST		Source Transformation Technique	
		2ND		Solve numerical problems (With Independent Sources Only)	
		3RD	UNIT-IV	**NETWORK THEOREMS:**	
		4TH		Star to delta and delta to star transformation	

		6TH		
AUGUST	**3RD**	1ST		Super position Theorem
		2ND		Thevenin's Theorem
				1st class Test
		3RD		Norton's Theorem
		4TH		Maximum power Transfer Theorem.
		6TH		Solve numerical problems (With Independent Sources Only)
	4TH	1ST	**UNIT-V**	**AC CIRCUIT AND RESONANCE:**
		2ND		A.C. through R-L, R-C & R-L-C Circuit
		3RD		Solution of problems of A.C. through R-L, R-C & R-L-C series Circuit by complex algebra method.
		4TH		Solution of problems of A.C. through R-L, R-C & R-L-C parallel & Composite Circuits
		6TH		Power factor & power triangle.
	5TH	2ND		Deduce expression for active, reactive, apparent power
		3RD		
		4TH		Derive the resonant frequency of series resonance and parallel resonance circuit
		6TH		Define Bandwidth, Selectivity & Q-factor in series circuit.
SEPTEMBER	**1ST**	1ST		Solve numerical problems
		2ND	**UNIT-VI**	**POLYPHASE CIRCUIT**
		3RD		Concept of poly-phase system and phase sequence
		4TH		Relation between phase and line quantities in star & delta connection
		6TH		Power equation in 3-phase balanced circuit.
	2ND	1ST		Solve numerical problems
		2ND		Measurement of 3-phase power by two wattmeter method
		3RD		Solve numerical problems
		4TH	**UNIT-VII**	**TRANSIENTS:**
		6TH		Steady state & transient state response.
	3RD	1ST		Response to R-L, R-C & RLC circuit under DC condition
		2ND		Solve numerical problems
		3RD	**UNIT-VIII**	**TWO-PORT NETWORK:**
				Internal Assesment
		4TH		Open circuit impedance (z) parameters
		6TH		Short circuit admittance (y) parameters
		1ST		Transmission (ABCD) parameters
		2ND		Hybrid (h) parameters.

	4TH	3RD			Inter relationships of different parameters
		4TH			T and π representation.
		6TH			Solve numerical problems
				UNIT-IX	**FILTERS:**
	5TH	1ST			Introduction to Filter
OCTOBER	**1ST**	1st			Define filter,9.2 Classification of pass Band, stop Band and cut-off frequency.
					Classification of filters.
		3rd			Constant – K low pass filter.
		4th			Constant – K high pass filter.
		6th			Constant – K Band pass filter.
	2ND				DURGAPUJA HOLIDAY
	3rd	2ND			Constant – K Band elimination filter.
					Rasapurnima Holiday
		4TH			Solve Numerical problems
		6TH			Solving semester problems
	4TH	1ST			Solving semester problems
		2ND			Solving semester problems
		3RD			Solving semester problems
		4TH			Solving semester problems
		6TH			Solving semester problems
	5TH	1ST			Solving semester problems
		2ND			Solving semester problems
		3RD			Solving semester problems
NOVEMBER					
	1ST	6TH			Solving semester problems
	2ND	1ST			Solving semester problems
		2ND			Solving semester problems
					2ND class Test
		4TH			Solving semester problems
		6TH			Solving semester problems

3RD	1ST		Solving semester problems
	2ND		Solve Numerical problems
	3RD		Solving semester problems
	4TH		Solving semester problems
	6TH		Solving semester problems