

GOVT. POLYTECHNIC MAYURBHANJ LESSON PLAN

Discipline : ELECTRICAL ENGG.		Semester: 3rd Sem		Name of the Teaching Faculty : Hemanta Kumar Sethi	
Subject: CNT		No. of Days / per week class allotted : 05		Semester From date : 01.08.2023 To Date : 30.11.2023	
MONTH	Week	Day	Unit	Topics	
AUGUST	1ST	2ND	UNIT-1	MAGNETIC CIRCUITS	
		3RD		1. MAGNETIC CIRCUITS	
		4TH		1 . 1 Introduction	
		6TH		1 . 2 Magnetizing force, Intensity, MMF, flux and their relations	
	2ND	1ST		1 . 3 Permeability, reluctance and permeance	
		2ND		1 . 4 Analogy between electric and Magnetic Circuits	
		3RD		1 . 5 B-H Curve	
		4TH		1 . 6 Series & parallel magnetic circuit.	
		6TH		1 . 7 Hysteresis loop	
	3rd	1ST	UNIT-2	2. COUPLED CIRCUITS:	
		2ND		2 . 1 Self Inductance and Mutual Inductance	
		3RD		Independence day	
		4TH		2 . 2 Conductively coupled circuit and mutual impedance	
		6TH		2 . 3 Dot convention	
		1ST		2 . 4 Coefficient of coupling	
				2 . 5 Series and parallel connection of coupled inductors.	

SEPTEMBER	4TH	2ND		2 . 6 Solve numerical problems
		3RD	UNIT-3	3. CIRCUIT ELEMENTS AND ANALYSIS:
		4TH		3 . 1 Active, Passive, Unilateral & bilateral, Linear & Non linear elements
		6TH		3 . 2 Mesh Analysis, Mesh Equations by inspection
	5TH	1ST		3 . 3 Super mesh Analysis
		2ND		3 . 4 Nodal Analysis, Nodal Equations by inspection
		3RD		JHULANA PURNIMA
		4TH		3 . 5 Super node Analysis.
	1ST	6TH		3 . 6 Source Transformation Technique
				3 . 7 Solve numerical problems (With Independent Sources Only)
	2ND	1ST	UNIT-4	4. NETWORK THEOREMS:
		2ND		4.1 Star to delta and delta to star transformation
		3RD		4.2 Super position Theorem
		4TH		4.3 Thevenin's Theorem
		6TH		4.4 Norton's Theorem
	3rd	1ST		4.5 Maximum power Transfer Theorem.
		2ND		4.6 Solve numerical problems (With Independent Sources Only)
		3RD		5. AC CIRCUIT AND RESONANCE:
		4TH		5.1 A.C. through R-L, R-C & R-L-C Circuit
		6TH		5.2 Solution of problems of A.C. through R-L, R- C & R-L-C series Circuit by complex

S	OCTOBER	4TH	1ST	UNIT-5	5.3 Solution of problems of A.C. through R-L, R- C & R-L-C parallel & Composite Circuits	
			2ND		GANESH PUJA	
			3RD		NUAKHAI	
			4TH		5.4 Power factor & power triangle.	
			6TH		5.5 Deduce expression for active, reactive, apparent power	
		5TH	1ST		5.6 Derive the resonant frequency of series resonance and parallel resonance circuit	
			2ND		5.7 Define Bandwidth, Selectivity & Q-factor in series circuit.	
			3RD		5.8 Solve numerical problems	
			4TH		UNIT-6	6. POLYPHASE CIRCUIT
			6TH			6.1 Concept of poly-phase system and phase sequence
	OCTOBER	1ST	1ST	UNIT-6	6.2 Relation between phase and line quantities in star & delta connection	
			2ND		6.3 Power equation in 3-phase balanced circuit.	
			3RD		6.4 Solve numerical problems	
			4TH		6.5 Measurement of 3-phase power by two wattmeter method	
			6TH		6.6 Solve numerical problems	
		2ND	1ST	UNIT-7	7. TRANSIENTS:	
			2ND		7.1 Steady state & transient state response.	
			3RD		7.2 Response to R-L, R-C & RLC circuit under DC condition	
			4TH		7.3 Solve numerical problems	
			6TH		UNIT-8	8. TWO-PORT NETWORK:
		3RD	1ST	8.1 Open circuit impedance (z) parameters		
			2ND	8.2 Short circuit admittance (y) parameters		
3RD	8.3 Transmission (ABCD) parameters					

NOVEMBER	4TH	4TH	UNIT-8	8.4 Hybrid (h) parameters.
		6TH		Solving Problems
		6TH		Durga puja
		1ST		
		2ND		
	5TH	6TH	UNIT-9	8.5 Inter relationships of different parameters
	1ST	3RD		8.6 T and π representation.
		4TH		8.7 Solve numerical problems
		6TH		9. FILTERS:
	2ND	1ST		9.1 Define filter
		2ND		9.2 Classification of pass Band, stop Band and cut- off frequency.
		3RD		9.3 Classification of filters.
		4TH		9.4 Constant – K low pass filter.
		6TH		9.5 Constant – K high pass filter.
				9.6 Constant – K Band pass filter.
	3RD	1ST		9.7 Constant – K Band elimination filter.
		2ND		9.8 Solve Numerical problems
		3RD		Solving semester Questions
		4TH		Solving semester Questions
	4TH	6TH		Solving semester Questions
		1ST		Solving semester Questions
		2ND		Solving semester Questions
		3RD		Solving semester Questions
		4TH		Solving semester Questions
		6TH		Solving semester Questions
		6TH		RASA PURNIMA

	5TH	2ND		Solving semester Questions
		3RD		Solving semester Questions
		4TH		Solving semester Questions