
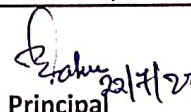


SYNERGY POLYTECHNIC, BBSR

The Lesson Plan		
Discipline: Electrical Engineering(EE)	Semester: 3rd	Name of the Teaching Faculty: Soumyashree Mohapatra
Subject: Circuit and Network Theory	No of Days/per week class allotted: 05	Semester from Date: 01.08.2023 to Date: No of Weeks:
Week	Class Day	Theory/Practical Topics
1st MODULE III CIRCUIT ELEMENTS AND ANALYSIS	1st	Active, Passive, Unilateral & bilateral, Linear & Non linear elements
	2nd	Mesh Analysis, Mesh Equations by inspection
	3rd	Super mesh Analysis
	4th	Nodal Analysis, Nodal Equations by inspection
	5th	Super node Analysis, Source Transformation Technique
2nd MODULE IV CIRCUIT ELEMENTS AND ANALYSIS	1st	Numerical problems
	2nd	Numerical problems
	3rd	Star to delta and delta to star transformation
	4th	Super position Theorem
	5th	Thevenin's Theorem
3rd MODULE IV CIRCUIT ELEMENTS AND ANALYSIS	1st	Norton's Theorem
	2nd	Maximum power Transfer Theorem
	3rd	Numerical problems
	4th	Numerical problems
	5th	Numerical problems
4th MODULE I MAGNETIC CIRCUITS	1st	Magnetizing force, Intensity, MMF, flux and their relations
	2nd	Permeability, reluctance and permeance, Analogy between electric and Magnetic Circuits
	3rd	B-H Curve
	4th	Series & parallel magnetic circuit.
	5th	Hysteresis loop
5th MODULE II COUPLED CIRCUITS	1st	Self Inductance and Mutual Inductance
	2nd	Conductively coupled circuit and mutual impedance
	3rd	Dot convention
	4th	Coefficient of coupling
	5th	Series and parallel connection of coupled inductors.


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1st MODULE V AC CIRCUIT AND RESONANCE	1st	A.C. through R-L, R-C & R-L-C Circuit Solution of problems of A.C. through R-L, R-C & R-L-C series
	2nd	Circuit by complex algebra method. Solution of problems of A.C. through R-L, R-C & R-L-C parallel
	3rd	& Composite Circuits
	4th	Power factor & power triangle.
	5th	Deduce expression for active, reactive, apparent power. Derive the resonant frequency of series resonance and parallel resonance circuit
2nd MODULE V AC CIRCUIT AND RESONANCE	1st	
	2nd	Define Bandwidth, Selectivity & Q-factor in series circuit.
	3rd	numerical problems
	4th	numerical problems
	5th	numerical problems
3rd MODULE VI POLYPHASE CIRCUIT	1st	Concept of poly-phase system and phase sequence Relation between phase and line quantities in star & delta connection
	2nd	
	3rd	Power equation in 3-phase balanced circuit.
	4th	Measurement of 3-phase power by two wattmeter method.
	5th	Numerical problems
4th MODULE VII TRANSIENTS	1st	Steady state & transient state response.
	2nd	Steady state & transient state response.
	3rd	Response to R-L, R-C & RLC circuit under DC condition.
	4th	numerical problems
	5th	numerical problems
5th MODULE VIII TWO-PORT NETWORK	1st	Open circuit impedance (z) parameters
	2nd	Short circuit admittance (y) parameters
	3rd	Transmission (ABCD) parameters
	4th	Hybrid (h) parameters.
	5th	T and π representation

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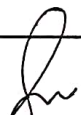

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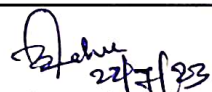
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1st MODULE IX FILTERS:	1st	Classification of pass Band, stop Band and cut-off frequency.
	2nd	Constant – K low pass filter.
	3rd	Constant – K high pass filter.
	4th	Constant – K Band pass filter
	5th	Constant – K Band elimination filter
2nd	1st	
	2nd	
	3rd	
	4th	
	5th	
3rd	1st	
	2nd	
	3rd	
	4th	
	5th	
4th	1st	
	2nd	
	3rd	
	4th	
	5th	
5th	1st	
	2nd	
	3rd	
	4th	
	5th	


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