GOVT. POLYTECHNIC KENDRAPARA
LESSON PLAN
Session(2024-2025)

	Discipline: ETC	Semester-3rd Winter-24	Name of the Teachng Faculty: PRIYANKA DHAL(GUEST FACULTY)
Sl. No.	Subject-Th.2 Circuit Theory	No. Of Days/Week class alloted:04	Start Date: 01/07/2024 End Date: 08/11/2024
	Weeks/Months	Class Day	Topic
1	1st week 1st july to 6th july	1st	CIRCUIT ELEMENTS & ENERGY SOURCESCircuit elements (Resistance, Inductance, Capacitance), Scope of network analysis & synthesis.
		2nd	Voltage Division & Current Division, Energy Sources
		3rd	Electric charge, electric current, Electrical energy, Electrical pote
		4th	Energy Sources, Current and voltage sources and their transformation & mutual inductance
2	2nd week 08th july to 13th july	1st	Star – Delta transformation
		2nd	Numerical problems & assignments
		3rd	NETWORK THEOREMS (Applications in dc circuits)Nodal & Mesh Analysis of Electrical Circuits with simple problem.
		4th	Statement, Explanation & applications- Thevenin's Theorem
3	3rd week 15th july to 20th july	1st	Statement, Explanation & applications- Norton's Theorem
		2nd	Statement, Explanation & applications- Maximum Power transfer Theorem
		3rd	Statement, Explanation & applications- Superposition Theorem
		4th	Statement, Explanation & applications- Millman Theorem
4	4th week 22nd july to 27th july	1st	Statement, Explanation & applications- Reciprocity Theorem
		2nd	Solve numerical problems
		3rd	Power Relation in AC circuits & Transient Response of passive circuits.Definition of frequency, Cycle, Time period, Amplitude, Average value, RMS value, Instantaneous power & Form factor
		4th	Definition of Apparent power, Reactive power, power Triangle of AC V
5	5th week 29july to 3rd august	1st	Phasor representation of alternating quantities
		2nd	ingle phase Ac circuits-Behaviours of A.C. through pure Resistor
		3rd	Single phase Ac circuits-Behaviours of A.C. through pure Resistor
		4th	Single phase Ac circuits-Behaviours of A.C. through pure Inductor & Capacitor
		1st	DC Transients-Behaviors of R-L, R-C, R-L-C series circuit & draw the phasor diagram and voltage triangle
		3rd	Define Time Constant of the above Circuit

	[illegible]	3rd	Network Configurations (T & pie).
		4th	Open circuit (Z-Parameter)& Short Circuit(Y-Parameter) Parameters- C
14	4th week 21st oct to 28th oct	1st	h- parameter (hybrid parameter) Representation
		2nd	Define T-Network & pie – Network
		3rd	Unit-7: FILTERS& ATTENUATORS
		4th	Ideal &Practical filters and its applications, cut off frequency,
15	1st week 2nd Nov to 8th Nov	1st	Classify filters- low pass, high pass, band pass, band stop filters & study their Characteristics.
		2nd	Butterworth Filter Design
		3rd	Attenuation and Gain, Bel , Decibel & neper and their relations.
		4th	Attenuators& its applications. Classification-T- Type & PI – Type attenuators

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