Discipline – Electrical Engg	Semester 3RD	NAME OF THE TEACHING FACULTY- SIBANI PANDA, LECT(ELECT.)	
SUB- ELECTRICAL CIRCUITS LAB	No Of Days Per Week Class Alloted - 8 P	SEMESTER FROM 14.07.2025 to 15.11.2025 NO OF WEEK – 18 WEEKS	
Week	**Class Day**	**TOPICS TO BE COVERED**	**Status**
1st	Group 1 (4p)	Use voltmeter, ammeter, wattmeter to determine active, reactive and apparent power consumed in given R-L-C series circuit. Draw phasor diagram.	
	Group 2 (4p)	Use voltmeter, ammeter, wattmeter to determine active, reactive and apparent power consumed in given R-L-C series circuit. Draw phasor diagram.	
2nd	Group 1 (4p)	Use variable frequency supply to create resonance in given series R-L-C circuit or by using variable inductor or variable capacitor.	
	Group 2 (4p)	Use variable frequency supply to create resonance in given series R-L-C circuit or by using variable inductor or variable capacitor	
3rd	Group 1 (4p)	Use voltmeter, ammeter, wattmeter, p.f meter to determine current, p.f., active, reactive and apparent power for given R-L-C parallel circuit with series connection of resistor and inductor in parallel with capacitor.	
	Group 2 (4p)	Use voltmeter, ammeter, wattmeter, p.f meter to determine current, p.f., active, reactive and apparent power for given R-L-C parallel circuit with series connection of resistor and inductor in parallel with capacitor	
4TH	Group 1 (4p)	Repeat Above Three Experiments In Case Not Done Properly By Each Students & Viva	
	Group 2 (4p)	Repeat Above Three Experiments In Case Not Done Properly By Each Students & Viva	
5th	Group 1 (4p)	Use variable frequency supply create resonance in given parallel R-L-C circuit or by using variable inductor or capacitor	
	Group 2 (4p)	Use variable frequency supply create resonance in given parallel R-L-C circuit or by using variable inductor or capacitor	
6TH	Group 1 (4p)	Use voltmeter, ammeter, wattmeter, p.f meter to determine line and phase quantities of voltage and current for balanced three phase star and delta connected load and calculate active, reactive, and apparent power. Draw phasor diagram.	
	Group 2 (4p)	Use voltmeter, ammeter, wattmeter, p.f meter to determine line and phase quantities of voltage and current for balanced three phase star and delta connected load and calculate active, reactive, and apparent power. Draw phasor diagram.	
7TH	Group 1 (4p)	Repeat Above Three Experiments In Case Not Done Properly By Each Students & Viva	
	Group 2 (4p)	Repeat Above Three Experiments In Case Not Done Properly By Each Students & Viva	
8TH	Group 1 (4p)	Use voltmeter, ammeter to determine current through the given branch and voltage across the given element of circuit by applying superposition theorem.	
	Group 2 (4p)	Use voltmeter, ammeter to determine current through the given branch and voltage across the given element of circuit by applying superposition theorem.	
9TH	Group 1 (4p)	Use voltmeter, ammeter to determine equivalent circuit parameter in a given circuit by applying Thevenin's theorem	
	Group 2 (4p)	Use voltmeter, ammeter to determine equivalent circuit parameter in a given circuit by applying Thevenin's theorem	
10TH	Group 1 (4p)	Use voltmeter, ammeter to determine equivalent circuit parameter in a given circuit by applying Norton's theorem	
	Group 2 (4p)	Use voltmeter, ammeter to determine equivalent circuit parameter in a given circuit by applying Norton's theorem	
11TH	Group 1 (4p)	Repeat Above Three Experiments In Case Not Done Properly By Each Students & Viva	
	Group 2 (4p)	Repeat Above Three Experiments In Case Not Done Properly By Each Students & Viva	
12TH	Group 1 (4p)	Use voltmeter, ammeter to determine load resistance for maximum power transfer for a given circuit by applying maximum power transfer theorem.	

	Group 2 (4p)	Use voltmeter, ammeter to determine load resistance for maximum power transfer for a given circuit by applying maximum power transfer theorem.	
13TH	Group 1 (4p)	Use voltmeter, ammeter to determine current through the given branch of a electric network by applying node analysis.	
	Group 2 (4p)	Use voltmeter, ammeter to determine current through the given branch of a electric network by applying node analysis.	
14TH	Group 1 (4p)	Using Simulink, determine A.C voltage and current response in given R, L, C circuit.	
	Group 2 (4p)	Using Simulink, determine A.C voltage and current response in given R, L, C circuit.	
15TH	Group 1 (4p)	Repeat Above Three Experiments In Case Not Done Properly By Each Students & Viva	
	Group 2 (4p)	Repeat Above Three Experiments In Case Not Done Properly By Each Students & Viva	
16TH	Group 1 (4p)	Using Simulink, create resonance in given series R-L-C circuit	
	Group 2 (4p)	Using Simulink, create resonance in given series R-L-C circuit	
17TH	Group 1 (4p)	Verify network theorems(Superposition, Thevenin's, Norton's, Maximum power transfer) using Simulink Simscape	
	Group 2 (4p)	Verify network theorems(Superposition, Thevenin's, Norton's, Maximum power transfer) using Simulink Simscape	
18TH	Group 1 (4p)	Repeat Above Three Experiments In Case Not Done Properly By Each Students & Viva	
	Group 2 (4p)	Repeat Above Three Experiments In Case Not Done Properly By Each Students & Viva	

11.3.25