

DEPARTMENT OF ELECTRICAL ENGINEERING(G.P,NAYAGADA) LESSON PLAN			
Discipline : ELECTRICAL ENGG.	Semester: 3rd Sem	Name of the Teaching Faculty : Suryamani Sahoo	
Subject : E.C	No. of Days / per week class allotted : 03	Semester From date : 01.07.2026 No. of Weeks : 15	To Date : 05.11.2026
Week	Class Day	Topics	Cos
1ST	1st	1.Single Phase A.C Series Circuits.1.1 Generation of alternating voltage 1.2 Phasor representation of sinusoidal quantities	CO1
	2nd	1.3 R, L, C circuit elements its voltage and current response 1.4 R-L, R-C, R-L-C combination of A.C series circuit	CO1
	3rd	1.4.1 Impedance, reactance, impedance triangle	CO1
2ND	1st	1.4.2 Power factor, active power, reactive power, apparent power 1.4.3 Power triangle and vector diagram	CO1
	2nd	1.4.4 Resonance, Bandwidth	CO1
	3rd	1.4.5 Quality factor and voltage magnification in series R-L, R-C, R-L-C circuit	CO1
3RD	1st	Doubt Clear & Revision	
	2nd	2.Single Phase A.C Parallel Circuits 2.1 R-L, R-C and R-L-C parallel combination of A.C. circuits	CO1
	3rd	2.1.1 Impedance, reactance, phasor diagram, impedance triangle	CO1
4TH	1st	2.1.1 Impedance, reactance, phasor diagram, impedance triangle	CO1
	2nd	2.1.2 Power factor, active power, apparent power, reactive power, power triangle	CO1
	3rd	2.2 Resonance in parallel R-L, R-C, R-L-C circuit	CO1
5TH	1st	2.3 Bandwidth, Quality factor and voltage magnification	CO1
	2nd	2.3 Bandwidth, Quality factor and voltage magnification	CO1
	3rd	CLASS TEST-1	
6TH	1st	3.Three Phase Circuits 3.1 Phasor and complex representation of three phase supply	CO2
	2nd	3.2 Phase sequence and polarity	CO2
	3rd	3.3 Types of three-phase connections	CO2
7TH	1st	3.4 Phase and line quantities in three phase star and delta system	CO2
	2nd	3.5 Balanced and unbalanced load	CO2
	3rd	3.6 Neutral shift in unbalanced load	CO1
8TH	1st	3.7 Three phase power, active, reactive and apparent power in star and delta system	CO2
	2nd	3.7 Three phase power, active, reactive and apparent power in star and delta system	CO2
	3rd	Doubt Clear and Revision	
9TH	1st	4.Network Reduction and Principles of Circuit Analysis 4.1 Source transformation	CO3
	2nd	4.2 Star/delta and delta/star transformation	CO3
	3rd	4.3 Mesh Analysis	CO3
10TH	1st	4.4 Node Analysis	CO3
	2nd	Doubt Clear and Revision/CLASS TEST-2	
	3rd	5.Network Theorems	
11TH	1st	5.1 Superposition theorem	CO3
	2nd	5.2 Thevenin's theorem	CO3
	3rd	Solution of Numerical Problems.	CO3
12TH	1st	5.3 Norton's theorem	CO4
	2nd	5.4 Maximum power transfer theorem	CO4
	3rd	Solution of Numerical Problems.	CO4
13TH	1st	5.5 Reciprocity Theorem	CO4
	2nd	Solution of Numerical Problems.	CO4
	3rd	Doubt clear and Revision	CO4
14TH	1st	6.Two Port Network	
	2nd	6.1 Open Circuit Impedance Parameters	CO5
	3rd	6.2 Short Circuit Admittance Parameters, Transmission Parameters , Hybrid Parameters	CO5
15TH	1st	6.3 Interrelationship of Two Port Network	CO5
	2nd	6.4 Inter Connection of Two Port Network	CO5
	3rd	CLASS TEST-3	
16TH	1st	Doubt clear and Revision	
	2nd	Doubt clear and Revision	
	3rd	Doubt clear and Revision	

COURSE OUTCOMES:

After the completion of this course, the students will be able to:

- CO1:Explain various characteristics of different single phase AC series, AC parallel circuits and terms related to three phase circuits
- CO2:Solve problems using network reduction & principles of circuit analysis
- CO3:Apply Network theorems in analyzing and solving electrical circuit problems
- CO4:Explain the behavior of circuit in transient condition.
- CO5:Describe two-port networks

Signature of Faculty

Signature of HOD