

# GOVERNMENT POLYTECHNIC ASTHAWAN, NALANDA

## (Department of Electrical Engineering)

<b>Semester:</b>	3rd electrical
<b>Subject:</b>	Electrical Circuits & Network
<b>Subject Code:</b>	1620302
<b>Lecture /week :</b>	3
<b>Name of the Faculty:</b>	Chandan Kumar

### Lesson Plan

WEEK	LECTURE NO. ( 1 Hr Each)	UNIT	TOPIC OF CLASS & DISCUSSION	TEACHING MODE
Week 1	1	UNIT -1	Electrical Circuit Elements R, L	Lecture/PPT/ Pdf/Video
	2		Electrical circuit element C	Lecture/PPT/ Pdf/Video
	3		Energy Sources	Lecture/PPT/ Pdf/Video
Week 2	4		A. C wave form and definition of various term associated with it	Lecture/PPT/ Pdf/Video
	5		Response of pure R, L, and C to AC supplies	Lecture/PPT/ Pdf/Video
	6		Vector Representation of alternating quantity.	Lecture/PPT/ Pdf/Video
Week 3	7	Unit-2	Series AC circuits R-L,R-C and R-L-C circuits	Lecture/PPT/ Pdf/Video
	8		Impedance, Reactance,phasor diagram	Lecture/PPT/ Pdf/Video
	9		impedance triangle, power factor, Average power,Apparent power	Lecture/PPT/ Pdf/Video
Week 4	10		Reactive power, Power triangle (Numerical)	Lecture/PPT/ Pdf/Video
	11		Series Resonance	Lecture/PPT/ Pdf/Video
	12		quality factor (Numerical)	Lecture/PPT/ Pdf/Video
Week 5	13		Parallel AC circuits R-L, R-C and R-L-C circuits.	Lecture/PPT/ Pdf/Video
	14		Admittance,Susceptance	Lecture/PPT/ Pdf/Video
	15		Solution by admittance method, phasor diagram	Lecture/PPT/ Pdf/Video
Week 6	16		complex Algebra method. (Numerical)	Lecture/PPT/ Pdf/Video
	17		Parallel resonance, quality factor	Lecture/PPT/ Pdf/Video
	18		Comparison of series and Parallel circuits.	Lecture/PPT/ Pdf/Video
Week 7	19	Unit-3	Generation of three phase e. m. f.	Lecture/PPT/ Pdf/Video
	20		Phase sequence, polarity marking	Lecture/PPT/ Pdf/Video
	21		Types of three-phase connections.	Lecture/PPT/ Pdf/Video
Week 8	22		Types of three-phase connections continue.....	Lecture/PPT/ Pdf/Video
	23		Concept of unbalanced load	Lecture/PPT/ Pdf/Video
	24		Concept of balanced load.	Lecture/PPT/ Pdf/Video

Week 9	25		Line, phase quantities and power in three phase system	Lecture/PPT/Pdf/Video
	26		balanced star and Delta connected load & their interrelationship	Lecture/PPT/Pdf/Video
	27		Advantages of polyphase circuits over single phase circuits	Lecture/PPT/Pdf/Video
Week 10	28		Advantages of polyphase circuits over single phase circuits cont.....	Lecture/PPT/Pdf/Video
	29		Mesh analysis.	Lecture/PPT/Pdf/Video
	30		numerical cont.....	Lecture/PPT/Pdf/Video
Week 11	31	Unit-4	Node analysis	Lecture/PPT/Pdf/Video
	32		Node analysis with voltage current source . (Numericals)	Lecture/PPT/Pdf/Video
	33		Node analysis numerical	Lecture/PPT/Pdf/Video
Week 12	34		numerical continue	Lecture/PPT/Pdf/Video
	35		Star/delta & Delta/star transformations	Lecture/PPT/Pdf/Video
	36		Star/delta & Delta/star transformations numerical	Lecture/PPT/Pdf/Video
Week 13	37		Superposition Theorem	Lecture/PPT/Pdf/Video
	38		Superposition Theorem numerical	Lecture/PPT/Pdf/Video
	39		Thevenin's Theorem	Lecture/PPT/Pdf/Video
Week 14	40	Unit -5	Thevenin's Theorem numerical	Lecture/PPT/Pdf/Video
	41		Norton's Theorem	Lecture/PPT/Pdf/Video
	42		Norton's Theorem numerical	Lecture/PPT/Pdf/Video
Week 15	43		Source conversion	Lecture/PPT/Pdf/Video
	44		Ideal voltage and current source	Lecture/PPT/Pdf/Video
	45		Maximum power transfer Theorem	Lecture/PPT/Pdf/Video
Week 16	46		Maximum power transfer Theorem numerical	Lecture/PPT/Pdf/Video