DISCIPLINE– ELECTRICAL ENGG	SEMESTER- 3RD	NAME OF THE TEACHING FACULTY- SIBANI PANDA,LECT (ELECT)	
SUB- ELECTRICAL CIRCUITS	NO OF CLASSES/ WEEK – 3P	TIME PERIOD- 14.07.2025 TO 15.11.2025 NO OF WEEKS- 18	
SL NO	CLASS DAY	TOPIC TO BE COVERED	REMARK
1	1ST DAY 2ND DAY 3RD DAY	**Single Phase A.C Series Circuits** 1.1 Generation of alternating voltage 1.2 Phasor representation of sinusoidal quantities 1.3 R, L, C circuit elements its voltage and current response	
2	1ST DAY 2ND DAY 3RD DAY	1.4 R-L, R-C, R-L-C combination of A.C series circuit 1.4.1 Impedance, reactance, impedance triangle 1.4.2 Power factor, active power, reactive power, apparent power 1.4.3 Power triangle and vector diagram	
3	1ST DAY 2ND DAY 3RD DAY	1.4.4 Resonance, Bandwidth 1.4.5 Quality factor and voltage magnification in series R-L, R-C, R-L-C circuit **Single Phase A.C Parallel Circuits** R-L parallel combination of A.C. circuits 2.1.1 Impedance, reactance, phasor diagram, impedance triangle 2.1.2 Power factor, active power, apparent power, reactive power, power triangle	
4	1ST DAY 2ND DAY 3RD DAY	R-C and R-L-C parallel combination of A.C. circuits 2.1.1 Impedance, reactance, phasor diagram, impedance triangle 2.1.2 Power factor, active power, apparent power, reactive power, power triangle	
5	1ST DAY 2ND DAY 3RD DAY	2.2 Resonance in parallel R-L, R-C, R-L-C circuit 2.3 Bandwidth, Quality factor and voltage magnification	
6	1ST DAY 2ND DAY 3RD DAY	**Three Phase Circuits** 3.1 Phasor and complex representation of three phase supply 3.2 Phase sequence and polarity 3.3 Types of three-phase connections	
7	1ST DAY 2ND DAY 3RD DAY	3.4 Phase and line quantities in three phase star and delta system 3.5 Balanced and unbalanced load 3.6 Neutral shift in unbalanced load	
8	1ST DAY 2ND DAY 3RD DAY	3.7 Three phase power, active, reactive and apparent power in star and delta system **INTERNAL 1**	
9	1ST DAY 2ND DAY 3RD DAY	**Network Reduction and Principles of Circuit Analysis** 4.1 Source transformation 4.2 Star/delta and delta/star transformation 4.3 Mesh Analysis	
10	1ST DAY 2ND DAY 3RD DAY	4.4 Node Analysis **Network Theorems** 5.1 Superposition theorem	
11	1ST DAY 2ND DAY 3RD DAY	5.2 Thevenin's theorem 5.3 Norton's theorem	
12	1ST DAY 2ND DAY 3RD DAY	5.3 Norton's theorem 5.4 Maximum power transfer theorem 5.5 Reciprocity Theorem	
13	1ST DAY 2ND DAY 3RD DAY	5.5 Reciprocity Theorem **Two Port Network** 6.1 Open Circuit Impedance Parameters 6.2 Short Circuit Admittance Parameters	
14	1ST DAY 2ND DAY 3RD DAY	6.2 Short Circuit Admittance Parameters Transmission Parameters Hybrid Parameters	
15	1ST DAY 2ND DAY 3RD DAY	6.3 Interrelationship of Two Port Network 6.4 Inter Connection of Two Port Network	
16	1ST DAY 2ND DAY 3RD DAY	6.4 Inter Connection of Two Port Network **INTERNAL 2**	
17	1ST DAY 2ND DAY 3RD DAY	REVISION	
18	1ST DAY 2ND DAY 3RD DAY	REVISION VST	

Panda 11.07.25