SIDDHARTH INSTITUTE OF ENGINEERING AND TECHNOLOGY, KORAPUT

DEPARTMENT OF ELECTRICAL ENGINEERING

LESSON PLAN

Name of the Course : TH-2 : ELECTRICAL CIRCUITS			
Name of the Faculty: Er. DEBASHISH MISHRA			
Semester from date : 01.07.2026 TO 05.11.2026			
Course Code :	EEPC203	Semester :	3rd
Total Periods:	45 Periods	Examination :	3Hrs
Theory Periods :	45 Hrs.	Progressive Assessment :	30
Lecture :	3Hrs/week	End Term Exam :	70
Credit :	3	Total Marks :	100

VISION:

To create competent and industry ready Electrical Diploma Engineers with professional and social values to meet future challenges.

MISSION:

- To prepare diploma holders through "qualitative competency-based education system" to compete with national requirement along with core values.
- To produce dynamic Electrical Engineers to serve the society and industry.
- To develop leadership qualities, communication skills, critical thinking and attitude for lifelong learning.

PROGRAM EDUCATIONAL OBJECTIVES:

PEO1	Applying technical knowledge and skills learned in the field of Electrical Engineering to excel in professional and/or higher education.
PEO2	To provide students an excellent academic environment and make them aware the needs of Society and Industry to become a successful Professional/Entrepreneur.
PEO3	To engage in lifelong learning, career enhancement to adopt to emerging technologies.

COURSE OUTCOME:

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 behaviour of circuit in transient condition.
CO5	Describe two-port network

TOPIC WISE DISTRIBUTION OF PERIODS

Unit No.	Topics	Periods
I	Single Phase A.C Series Circuits	07
II	Single Phase A.C Parallel Circuits	08
III	Three Phase Circuits	08
IV	Network Reduction and Principles of Circuit Analysis	05
V	Network Theorems	09
VI	Two Port Network	08

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Week	Day	Theory Topic	Corresponding CO
1st	MONDAY	NO CLASS	
	TUESDAY	NO CLASS	
	FRIDAY	Generation of alternating voltage	CO1
2nd	MONDAY	Phasor representation of sinusoidal quantities	CO1
	TUESDAY	R, L, C circuit elements its voltage and current response	CO1
	FRIDAY	R-L combination of A.C series circuit-Impedance, reactance, impedance triangle, Power factor, active power, reactive power, apparent power, Power triangle and vector diagram, Resonance, Bandwidth,	CO1
3rd	MONDAY	R-C combination of A.C series circuit-Impedance, reactance, impedance triangle, Power factor, active power, reactive power, apparent power, Power triangle and vector diagram, Resonance, Bandwidth	CO1
	TUESDAY	R-L-C combination of A.C series circuit-Impedance, reactance, impedance triangle, Power factor, active power, reactive power, apparent power, Power triangle and vector diagram, Resonance, Bandwidth	CO1
	FRIDAY	Quality factor and voltage magnification in series R-L, R-C,R-L-C circuit	CO1
4th	MONDAY	R-L parallel combination of A.C. circuits- Impedance, reactance, phasor diagram, impedance triangle, Power factor, active power, apparent power, reactive power, power triangle	CO2
	TUESDAY	R-C parallel combination of A.C. circuits- Impedance, reactance, phasor diagram, impedance triangle, Power factor, active power, apparent power, reactive power, power triangle	CO2
	FRIDAY	R-L-C parallel combination of A.C. circuits- Impedance, reactance, phasor diagram, impedance triangle, Power factor, active power, apparent power, reactive power, power triangle	CO2
5th	MONDAY	Resonance in parallel R-L circuit	CO2
	TUESDAY	Resonance in parallel R-C circuit	CO2
	FRIDAY	Resonance in parallel R-L-C circuit	CO2
	MONDAY	Bandwidth, Quality factor and voltage magnification	CO2
	TUESDAY	Phasor and complex representation of three phase supply	CO3

6th	FRIDAY	Phase sequence and polarity	CO3
7th	MONDAY	Types of three-phase connections	CO3
	TUESDAY	Phase and line quantities in three phase star and delta system	CO3
	FRIDAY	Balanced and unbalanced load	CO3
8th	MONDAY	Neutral shift in unbalanced load	CO3
	TUESDAY	Three phase power, active, reactive and apparent power in star system	CO3
	FRIDAY	Three phase power, active, reactive and apparent power in delta system	CO3
9th	MONDAY	Source transformation	CO4
	TUESDAY	Star/delta transformation	CO4
	FRIDAY	Delta/star transformation	CO4
10th	MONDAY	Mesh Analysis	CO4
	TUESDAY	Node Analysis	CO4
	FRIDAY	Superposition theorem	CO5
11th	MONDAY	Superposition theorem	CO5
	TUESDAY	Thevenin's theorem	CO5
	FRIDAY	Thevenin's theorem	CO5
12th	MONDAY	Norton's theorem	CO5
	TUESDAY	Norton's theorem	CO5
	FRIDAY	Maximum power transfer theorem	CO5
13th	MONDAY	Maximum power transfer theorem	CO5
	TUESDAY	Reciprocity Theorem	CO5
	FRIDAY	Open Circuit Impedance Parameters	CO6
14th	MONDAY	Short Circuit Admittance Parameters,	CO6
	TUESDAY	Transmission Parameters	CO6
	FRIDAY	Hybrid Parameters	CO6
15th	MONDAY	Interrelationship of Two Port Network	CO6
	TUESDAY	Inter Connection of Two Port Network	CO6
	FRIDAY	Solve of related calculation	CO6

18/6/26

Signature of Faculty Concerned

(Electrical Engg.)

12/06/26

Head of Department

(Electrical Engg.)

H.O.D

Electrical Engg

SIET, KORAPUT

12/06/2026

Principal

S.I.E.&T, KORAPUT

Principal

Siddharth Institute of Engineering & Technology Ektaguda, Koraput