Discipline: ELECTRICAL ENGG.	Semester: 3RD	Name of the Teaching Faculty : ABHIPSA DUTTA
Subject: CIRCUIT AND NETWORK THEORY	No. of Days/per week class allotted:5	Semester from date: 15.09.2022 To Date:22.12.2022 No. of Weeks:15
Week	Class Day	Theory/ Practical Topics
1st	1st	Active, Passive, Unilateral & bilateral, Linear & Non linear elements Mesh Analysis
	2nd	Mesh Equations by inspection Super mesh Analysis
	3rd	Nodal Analysis
	4th	Nodal Equations by inspection Super node Analysis.
	5th	Different types of problem solving.
2nd	1st	Source Transformation Technique
	2nd	Solve numerical problems (With Independent Sources Only)
	3rd	Star to delta and delta to star transformation
	4th	Super position Theorem
	5th	Assignment checking and doubt clearing.
3rd	1st	Thevenin's Theorem.
	2nd	Norton's Theorem
	3rd	Maximum power Transfer Theorem
	4th	Solve numerical problems (With Independent Sources Only)
	5th	Assignment checking.
4th	1st	Solve numerical problems (With Independent Sources Only)
	2nd	Solve numerical problems (With Independent Sources Only)
	3rd	A.C. through R-L, R-C & R-L-C
	4th	Solution of problems of A.C. through R-L, R-C & R-L-C series Circuit by complex algebra method.
	5th	Different types of problem solving.
	1st	Solution of problems of A.C. through R-L, R-C & R-L-C parallel & Composite Circuits.
	2nd	Power factor & power triangle

5th	3rd	Deduce expression for active, reactive, apparent power.
	4th	Derive the resonant frequency of series resonance and parallel resonance circuit
	5th	Assignment checking and doubt clearing.
6th	1st	Define Bandwidth, Selectivity & Q-factor in series circuit
	2nd	Solve numerical problems
	3rd	Concept of poly-phase system and phase sequence.
	4th	Relation between phase and line quantities in star & delta connection
	5th	Different types of problem solving.
7th	1st	Power equation in 3-phase balanced circuit.
	2nd	Solve numerical problems.]
	3rd	Measurement of 3-phase power by two wattmeter method.
	4th	Solve numerical problems
	5th	Assignment checking and doubt clearing.
8th	1st	Self Inductance and Mutual Inductance
	2nd	Conductively coupled circuit and mutual impedance.
	3rd	Dot convention
	4th	Coefficient of coupling
	5th	Different types of problem solving.
9th	1st	Series and parallel connection of coupled inductors and Solve numerical problems
	2nd	Introduction of magnetic circuit Magnetizing force, Intensity, MMF, flux and their relations
	3rd	Permeability, reluctance and permeance
	4th	Analogy between electric and Magnetic Circuits
	5th	Assignment checking and doubt clearing.
10th	1st	B-H Curve
	2nd	Series & parallel magnetic circuit..
	3rd	Hysteresis loop
	4th	Problems on seies parallel magnet circuits
	5th	Different types of problem solving.
11th	1st	Steady state & transient state response..
	2nd	Response to R-L circuit under DC condition.
	3rd	Response to R-C circuit under DC condition.

	4th	Response to RLC circuit under DC condition
	5th	Assignment checking and doubt clearing.
12th	1st	Solve numerical problems..
	2nd	Solve numerical problems.
	3rd	Open circuit impedance (z) parameters
	4th	Short circuit admittance (y) parameters
	5th	Different types of problem solving.
13th	1st	Transmission (ABCD) parameters.
	2nd	Hybrid (h) parameters..
	3rd	Inter relationships of different parameters.
	4th	T representation..
	5th	Assignment checking and doubt clearing.
14th	1st	π representation
	2nd	Solve numerical problems.
	3rd	Define filter Classification of pass Band, stop Band and cut-off frequency
	4th	Classification of filters.
	5th	Different types of problem solving.
15th	1st	Constant – K low pass filter
	2nd	Constant – K high pass filter. Constant – K Band pass filter 3
	3rd	Constant – K Band elimination filter. Solve Numerical problems.
	4th	Previous Year Question discussion
	5th	Assignment checking and doubt clearing.