ACADEMIC SESSION: 2023-24 (Winter-2023)

Discipline : ELECTRICAL ENGINEERING			Semester : 3RD	Name of the Teaching Faculty : Prabhudatta Pujapanda
Subject : Circuit and Network Theory			Semester From date: 1/08/2023 to 30/11/2023	
SL NO.	DATE	CHAPTER	THEORY TOPIC NAME	NO.OF PERIODS
1	1.8.23	Magnetic Circuit	Introduction of magnetic circuit and couple circuit	1
2	2.8.23		Magnetizing force, intensity, MMF, flux and their relation	1
3	3.8.23		Permeability, reluctance, and permeance	1
4	4.8.23		Analogy between electric and magnetic circuit	1
5	7.8.23		B-H curve	1
6	8.8.23		Series & parallel magnetic circuit	1
7	9.8.23		Hysteresis loop	1
8	10.8.23		Numerical problems on magnetic circuit	1
9	11.8.23	Coupled circuit	Self inductance	1
10	16.8.23		Mutual inductance	1
11	17.8.23		Dot convention	1
12	18.8.23		Coefficient of coupling	1
13	21.8.23		Series and parallel connection of coupled inductors	1
14	22.8.23		Solved numerical problems based on self inductance and mutual inductance	1
15	23.9.23	Circuit elements and analysis	Active , passive, unilateral & bilateral, linear and non linear elements	1
16	24.8.23		Mesh analysis, mesh equation by inspection	1
17	25.8.23		Super mesh analysis	1
18	28.8.23		Nodal analysis, nodal equation by inspection	1
19	29.8.23		Super node analysis	1
20	31.8.23		Source transformation technique	1
21	1.9.23		Solve numerical problems	1
22	4.9.23		Solve numerical problems with independent source only	1

23	5.9.23	Network theorems	Star to delta and delta to star transformation	1
24	7.9.23		Super position theorem	1
25	8.9.23		Thevenin's theorem	1
26	11.9.23		Norton' theorem	1
27	12.9.23		Maximum power transfer theorem	1
28	13.9.23		Solved numerical problems with independent source only	1
29	14.9.23	AC circuit and Resonance	AC through RL, RC, RLC circuit	1
30	15.9.23		Solution of problems of AC through RL, RC, RLC series circuit by complex algebra method	1
31	18.9.23		Solutions of problems of AC through RL,RC & RLC parallel circuit & composite circuit.	1
32	21.9.23		Power factor & power triangle	1
33	22.9.23		Deduce expression for active, reactive, apparent power	1
34	25.9.23		Derive the resonant frequency of series resonance and parallel resonance circuit.	1
35	26.9.23		Define bandwidth, selectivity & Q-factor in series circuit	1
36	27.9.23		Solve numerical problems	1
37	28.9.23	Polyphase circuit	Concept of polyphase system and phase sequence	1
38	3.10.23		Relation between phase and line quantities in star and delta connection	1
39	4.10.23		Power equation in three phase balanced circuit.	1
40	5.10.23		Solve numerical problems	1
41	6.10.23		Measurement of three phase power by two wattmeter method.	1
42	9.10.23		Solve numerical problems	1
43	10.10.23	Transients	Steady state & transient state response	1
44	11.10.23		Response to RL,RC, & RLC circuit under DC condition	1
45	12.10.23		Solve numerical problems	1

	13.10.23	Two port network	Open circuit impedance (z) parameters	1
	16.10.23		Short circuit admittance (Y) parameters	1
48	17.10.23		Transmission (ABCD) parameters	1
49	18.10.23		Hybrid (h) parameters	1
50	19.10.23		Interrelationships of different parameters	1
51	20.10.23		T and pi representation	1
52	25.10.23		Solve numerical problems	1
53	26.10.23	Filters	Define filters	1
			Classification of pass band, stop band, and cut off frequency	1
54	27.10.23			
55	30.10.23		Classification of filters	1
56	31.10.23			
			Constant –K low pass filter	1
57	1.11.23		Constant-K high pass filter	1
58	2.11.23		Constant –K band pass filter	1
59	3.11.23		Constant –k band elimination filter	1
60	6.11.23		Solve numerical problems	1
			TOTAL CLASS	60

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