

UTKAL GOURAV MADHUSUDAN INSTITUTE OF TECHNOLOGY, RAYAGADA
Academic lesson plan for summer semester – (2022-23)

Name of the teaching faculty:
 Semester: 3rd
 No. of periods per week: 5
 semester Exam: 80
 Total Marks: 100

Dharitree Behera

Discipline / Dept.: EE
 Subject (Theory): CNT
 Total Periods: 75
 Class Test: 20

Week	Period	Unit / chapter	Topic to be covered	Remark
1 ST	1 st	MAGNETIC CIRCUITS	Introduction	
	2 nd	MAGNETIC CIRCUITS	Magnetizing force, Intensity, MMF, flux and their	
	3 rd	MAGNETIC CIRCUITS	Permeability, reluctance and permeance	
	4 th	MAGNETIC CIRCUITS	Analogy between electric and Magnetic Circuits	
	5 th	TUTORIAL CUM DOUBT	DOUBT	
2 ND	1 st	MAGNETIC CIRCUITS	Explain about B-H Curve	
	2 nd	MAGNETIC CIRCUITS	Series & parallel magnetic circuit.	
	3 rd	MAGNETIC CIRCUITS	Hysteresis loop	
	4 th	COUPLED CIRCUITS	Self Inductance and Mutual Inductance	
	5 th	TUTORIAL CUM DOUBT CLEAR CLASS	Solve numerical problems	
3 RD	1 st	COUPLED CIRCUITS	Conductively coupled circuit and mutual impedance	
	2 nd	COUPLED CIRCUITS	Dot convention and its problem	
	3 rd	COUPLED CIRCUITS	Coefficient of coupling	
	4 th	COUPLED CIRCUITS	Series and parallel connection of coupled inductors	
	5 th	TUTORIAL CUM DOUBT CLEAR CLASS	Solve numerical problems	
4 TH	1 st	CIRCUIT ELEMENTS AND ANALYSIS	Active, Passive, Unilateral & bilateral, Linear & Non linear elements	
	2 nd	CIRCUIT ELEMENTS AND ANALYSIS	Mesh Analysis, Mesh Equations by inspection	
	3 rd	CIRCUIT ELEMENTS AND ANALYSIS	Super mesh Analysis	

	4 th	CIRCUIT ELEMENTS AND ANALYSIS	Nodal Analysis, Nodal Equations by inspection	
	5 th	TUTORIAL CUM DOUBT CLEAR CLASS	Solve numerical problems (With Independent Sources Only)	
5 TH	1 st	CIRCUIT ELEMENTS AND ANALYSIS	Supernode Analysis.	
	2 nd	CIRCUIT ELEMENTS AND ANALYSIS	Source Transformation Technique	
	3 rd	NETWORK THEOREMS	Star to delta transformation	
	4 th	NETWORK THEOREMS	delta to star transformation	
	5 th	TUTORIAL CUM DOUBT CLEAR CLASS	Solve numerical problems	
6 TH	1 st	NETWORK THEOREMS	Super position Theorem	
	2 nd	NETWORK THEOREMS	Thevenin's Theorem	
	3 rd	NETWORK THEOREMS	Norton's Theorem	
	4 th	NETWORK THEOREMS	Norton's Theorem	
	5 th	TUTORIAL CUM DOUBT CLEAR CLASS	Solve numerical problems (With Independent Sources Only)	
7 TH	1 st	NETWORK THEOREMS	Maximum power Transfer Theorem.	
	2 nd	NETWORK THEOREMS	Maximum power Transfer Theorem.	
	3 rd	AC CIRCUIT AND RESONANCE	A.C. through R-L, R-C & R-L-C Circuit	
	4 th	AC CIRCUIT AND RESONANCE	Solution of problems of A.C. through R-L, R-C & R-L-C series Circuit by complex algebra method.	
	5 th	TUTORIAL CUM DOUBT CLEAR CLASS	Solution of problems of A.C. through R-L, R-C & R-L-C parallel & Composite	
8 TH	1 st	AC CIRCUIT AND RESONANCE	Power factor & power triangle	
	2 nd	AC CIRCUIT AND RESONANCE	Deduce expression for active, reactive, apparent power	

	3 rd	AC CIRCUIT AND RESONANCE	Derive the resonant frequency of series resonance and parallel resonance circuit	
	4 th	AC CIRCUIT AND RESONANCE	Define Bandwidth, Selectivity & Q-factor in series circuit.	
	5 th	TUTORIAL CUM DOUBT CLEAR CLASS	Solve numerical problems	
9 TH	1 st	AC CIRCUIT AND	Solve numerical problems	
	2 nd	AC CIRCUIT AND RESONANCE	Solve numerical problems	
	3 rd	POLYPHASE CIRCUIT	Concept of poly-phase system and phase sequence	
	4 th	POLYPHASE CIRCUIT	Relation between phase and line quantities in star &	
	5 th	TUTORIAL CUM DOUBT	Solve numerical problems	
10 TH	1 st	POLYPHASE CIRCUIT	Power equation in 3-phase balanced circuit.	
	2 nd	POLYPHASE CIRCUIT	Solve numerical problems	
	3 rd	POLYPHASE CIRCUIT	Measurement of 3-phase power by two wattmeter method.	
	4 th	POLYPHASE CIRCUIT	Solve numerical problems	
	5 th	TUTORIAL CUM DOUBT CLEAR CLASS	Solve numerical problems	
11 TH	1 st	TRANSIENTS	Steady state & transient state response.	
	2 nd	TRANSIENTS	Steady state & transient state response.	
	3 rd	TRANSIENTS	Response to R-L, R-C & RLC circuit under DC condition.	
	4 th	TRANSIENTS	Response to R-L, R-C & RLC circuit under DC condition.	
	5 th	TUTORIAL CUM DOUBT CLEAR CLASS	Solve numerical problems	
12 TH	1 st	TRANSIENTS	Response to R-L, R-C & RLC circuit under DC condition.	
	2 nd	TRANSIENTS	Response to R-L, R-C & RLC circuit under DC condition.	

	3 rd	TWO-PORT NETWORK	Open circuit impedance (z) parameters	
	4 th	TWO-PORT NETWORK	Short circuit admittance (y) parameters	
	5 th	TUTORIAL CUM DOUBT	Transmission (ABCD) parameters	
13 TH	1 st	TWO-PORT NETWORK	Hybrid (h) parameters.	
	2 nd	TWO-PORT NETWORK	Inter relationships of different parameters.	
	3 rd	TWO-PORT NETWORK	T and π representation.	
	4 th	TWO-PORT NETWORK	T and π representation.	
	5 th	TUTORIAL CUM DOUBT	Solve numerical problems	
14 TH	1 st	TWO-PORT NETWORK	Solve numerical problems	
	2 nd	TWO-PORT NETWORK	Solve numerical problems	
	3 rd	FILTERS	Define filter	
	4 th	FILTERS	Classification of pass Band, stop Band and cut-off frequency.	
	5 th	TUTORIAL CUM DOUBT	Constant – K Band elimination filter.	
15 TH	1 st	FILTERS	Classification of filters.	
	2 nd	FILTERS	Constant – K low pass filter.	
	3 rd	FILTERS	Constant – K high pass filter.	
	4 th	FILTERS	Constant – K Band pass filter.	
	5 th	TUTORIAL CUM DOUBT CLEAR CLASS	Solve Numerical problems	