ACADEMIC LESSON PLAN OF WINTER 2021

Discipline: ELECTRICAL ENGINEERING	Semester: 3rdSem (SEC-A)	Name of the Teaching Faculty: ANANYA SHUBHADARSINEE
Subject: CIRCUIT & NETWORK THEORY	No. of days/per week class allotted: 4p/week No. Tutorial period 1p/week	Semester From: 1st OCT 2021 to 8th JAN 2022 No. of Weeks: 15 weeks

Week	Class Day	Topics to be Covered
1st	1-10-2021	1.MAGNETIC CIRCUITS 1.1 Introduction
	1-10-2021	1 . 2 Magnetizing force, Intensity, MMF, flux and their relations
	4-10-2021	1 . 3 Permeability, reluctance and permeance
	5-10-2021	1 . 4 Analogy between electric and Magnetic Circuits
	7-10-2021	Tutorial
2nd	8-10-2021	1 . 5 B-H Curve
	8-10-2021	1 . 6 Series & parallel magnetic circuit.
	21-10-2021	1 . 7 Hysteresis loop
	22-10-2021	2.COUPLED CIRCUITS: 2 . 1 Self Inductance and Mutual Inductance
	22-10-2021	Tutorial
3rd	25-10-2021	2 . 2 Conductively coupled circuit and mutual impedance 2 . 3 Dot convention 2 . 4 Coefficient of coupling
	26-10-2021	2 . 5 Series and parallel connection of coupled inductors.
	28-10-2021	2 . 6 Solve numerical problems (Contd.)
	29-10-2021	2 . 6 Solve numerical problems
	29-10-2021	Tutorial
4th	1-11-2021	3. CIRCUIT ELEMENTS AND ANALYSIS: 3 . 1 Active, Passive, Unilateral & bilateral, Linear &Non linear elements
	2-11-2021	3 . 2 Mesh Analysis, Mesh Equations by inspection
	5-11-2021	3 . 3 Super mesh Analysis
	5-11-2021	3 . 4 Nodal Analysis, Nodal Equations by inspection
	6-11-2021	3 . 5 Super node Analysis. 3 . 6 Source Transformation Technique 3 . 7 Solve numerical problems (With Independent Sources Only)
	8-11-2021	Tutorial
5th	9-11-2021	4. NETWORK THEOREMS: 4.1 Star to delta and delta to star transformation
	11-11-2021	4.2 Super position Theorem
	12-11-2021	4.3 Thevenin's Theorem
	12-11-2021	4.4 Norton's Theorem
	13-11-2021	4.5 Maximum power Transfer Theorem. 4.6 Solve numerical problems (With Independent Sources Only)(Contd.)
	15-11-2021	Tutorial
6th	17-11-2021	5. AC CIRCUIT AND RESONANCE: 5.1 A.C. through R-L, R-C & R-L-C Circuit
	18-11-2021	5.2 Solution of problems of A.C. through R-L, R-C & R-L-C series Circuit by complex algebra method.
	20-11-2021	5.3 Solution of problems of A.C. through R-L, R-C & R-L-C parallel & Composite Circuits 5.4 Power factor & power triangle.
	22-11-2021	5.5 Deduce expression for active, reactive, apparent power.

	24-11-2021	5.6 Derive the resonant frequency of series resonance and parallel resonance circuit
	25-11-2021	Tutorial
7th	26-11-2021	5.7 Define Bandwidth, Selectivity & Q-factor in series circuit.
	26-11-2021	5.8 Solve numerical problems
	27-11-2021	6. POLYPHASE CIRCUIT 6.1 Concept of poly-phase system and phase sequence 6.2 Relation between phase and line quantities in star & delta connection
	29-11-2021	6.3 Power equation in 3-phase balanced circuit
	1-12-2021	6.4 Solve numerical problems
	2-12-2021	Tutorial
8th	3-12-2021	6.5 Measurement of 3-phase power by two wattmeter method
	3-12-2021	6.6 Solve numerical problems.
	4-12-2021	7. TRANSIENTS 7.1 Steady state & transient state response.
	6-12-2021	7.2 Response to R-L, R-C & RLC circuit under DC condition. (Contd.)
	8-12-2021	7.2 Response to R-L, R-C & RLC circuit under DC condition.
	9-12-2021	Tutorial
9th	10-12-2021	7.3 Solve numerical problems(Contd.)
	10-12-2021	7.3 Solve numerical problems
	11-12-2021	8. TWO-PORT NETWORK 8.1 Open circuit impedance (z) parameters 8.2 Short circuit admittance (y) parameters
	13-12-2021	8.3 Transmission (ABCD) parameters
	15-12-2021	8.4 Hybrid (h) parameters.
	16-12-2021	Tutorial
10th	17-12-2021	8.5 Inter relationships of different parameters.
	17-12-2021	8.6 T and π representation.
	20-12-2021	8.7 Solve numerical problems
	22-12-2021	8.7 Solve numerical problems
	23-12-2021	Tutorial
11th	24-12-2021	8.7 Solve numerical problems
	24-12-2021	9. FILTERS: 9.1 Define filter
	27-12-2021	9.2 Classification of pass Band, stop Band and cut-off frequency
	29-12-2021	9.3 Classification of filters.
	30-12-2021	Tutorial
12th	31-12-2021	9.4 Constant – K low pass filter.
	31-12-2021	9.5 Constant – K high pass filter.
	3-01-2022	9.6 Constant – K Band pass filter.
	05-01-2022	9.7 Constant – K Band elimination filter.
	06-01-2022	Tutorial
13th	07-01-2022	9.8 Solve Numerical problems
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Signature of Teaching Faculty

ACADEMIC LESSON PLAN OF WINTER 2021

Discipline: ELECTRICAL ENGINEERING	Semester: 3rdSem (SEC-B)	Name of the Teaching Faculty: ANANYA SHUBHADARSINEE
Subject: CIRCUIT & NETWORK THEORY	No. of days/per week class allotted: 4p/week No. Tutorial period 1p/week	Semester From: 1st OCT 2021 to 8th JAN 2022 No. of Weeks: 15 weeks
Week	**Class Day**	**Topics to be Covred**
1st	4-10-2021	1.MAGNETIC CIRCUITS 1.1 Introduction 1 . 2 Magnetizing force, Intensity, MMF, flux and their relations
	7-10-2021	1 . 3 Permeability, reluctance and permeance 1 . 4 Analogy between electric and Magnetic Circuits
	7-10-2021	1 . 5 B-H Curve1 . 6 Series & parallel magnetic circuit. 1 . 7 Hysteresis loop
	21-10-2021	2.COUPLED CIRCUITS: 2 . 1 Self Inductance and Mutual Inductance
	21-10-2021	Tutorial
2nd	25-10-2021	2 . 2 Conductively coupled circuit and mutual impedance 2 . 3 Dot convention 2 . 4 Coefficient of coupling
	27-10-2021	2 . 5 Series and parallel connection of coupled inductors.
	27-10-2021	2 . 6 Solve numerical problems
	28-10-2021	3. CIRCUIT ELEMENTS AND ANALYSIS: 3 . 1 Active, Passive, Unilateral & bilateral, Linear &Non linear elements
	28-10-2021	Tutorial
3rd	01-11-2021	3 . 2 Mesh Analysis, Mesh Equations by inspection3 . 3 Super mesh Analysis
	03-11-2021	3 . 4 Nodal Analysis, Nodal Equations by inspection 3 . 5 Super node Analysis. 3 . 6 Source Transformation Technique
	08-11-2021	3 . 7 Solve numerical problems (With Independent Sources Only)
	10-11-2021	4. NETWORK THEOREMS: 4.1 Star to delta and delta to star transformation 4.2 Super position Theorem
	10-11-2021	Tutorial
4th	11-11-2021	4.3 Thevenin's Theorem 4.4 Norton's Theorem
	11-11-2021	4.5 Maximum power Transfer Theorem
	16-11-2021	4.6 Solve numerical problems (With Independent Sources Only)
	16-11-2021	5. AC CIRCUIT AND RESONANCE: 5.1 A.C. through R-L, R-C & R-L-C Circuit
	18-11-2021	Tutorial
5th	18-11-2021	5.2 Solution of problems of A.C. through R-L, R-C & R-L-C series Circuit by complex algebra method.
	23-11-2021	5.3 Solution of problems of A.C. through R-L, R-C & R-L-C parallel & Composite Circuits
	23-11-2021	5.4 Power factor & power triangle.
	25-11-2021	5.5 Deduce expression for active, reactive, apparent power.
	25-11-2021	Tutorial
6th	26-11-2021	5.6 Derive the resonant frequency of series resonance and parallel resonance circuit
	30-11-2021	5.7 Define Bandwidth, Selectivity & Q-factor in series circuit.
	30-11-2021	5.8 Solve numerical problems
	02-12-2021	6. POLYPHASE CIRCUIT 6.1 Concept of poly-phase system and phase sequence
	02-12-2021	Tutorial
7th	03-12-2021	6.2 Relation between phase and line quantities in star & delta connection

	07-12-2021	6.3 Power equation in 3-phase balanced circuit
	07-12-2021	6.4 Solve numerical problems
	09-12-2021	6.5 Measurement of 3-phase power by two wattmeter method.
	09-12-2021	Tutorial
8th	10-12-2021	6.6 Solve numerical problems.
	14-12-2021	7. TRANSIENTS 7.1 Steady state & transient state response. (Contd.)
	14-12-2021	7.1 Steady state & transient state response
	16-12-2021	7.2 Response to R-L, R-C & RLC circuit under DC condition. (Contd.)
	16-12-2021	Tutorial
9th	17-12-2021	7.3 Solve numerical problems
	21-12-2021	8. TWO-PORT NETWORK 8.1 Open circuit impedance (z) parameters
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10th	28-12-2021	8.4 Hybrid (h) parameters.
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	30-12-2021	8.6 T and π representation.
	30-12-2021	8.7 Solve numerical problems
	31-12-2021	Tutorial
11th	31-12-2021	9. FILTERS: 9.1 Define filter 9.2 Classification of pass Band, stop Band and cut-off frequency
	04-01-2022	9.3 Classification of filters. 9.4 Constant – K low pass filter. 9.5 Constant – K high pass filter.
	04-01-2022	9.6 Constant – K Band pass filter.
	06-01-2022	9.7 Constant – K Band elimination filter.
	06-01-2022	Tutorial
12th	07-01-2022	9.8 Solve Numerical problems

Signature of Teaching Faculty