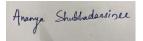
ACADEMIC LESSON PLAN OF WINTER 2023

Discipline: ELECTRICAL	Semester: 3 rd Sem (SEC-A)	Name of the Teaching Faculty: ANANYA SHUBHADARSINEE
Subject: TH-2	No. of days/per week	Semester From: 1 st Aug 2023 to 30 th Nov 2023
(CIRCUIT &	class allotted: 4p/week	No. of Weeks: 17 weeks
NETWORK	No. Tutorial period	
THEORY)	1p/week	
	1 st	1.MAGNETIC CIRCUITS
		1.1 Introduction
, st	2 nd	1.2 Magnetizing force, Intensity, MMF, flux and their relations
1 st	3 rd	1.3 Permeability, reluctance and permeance.
	4 th	1.4 Analogy between electric and Magnetic Circuits
	5 th	Tutorial
	1 st	1.5 B-H Curve
	2 nd	1 . 6 Series & parallel magnetic circuit.
- nd	3 rd	1.7 Hysteresis loop
2 nd	4 th	2.COUPLED CIRCUITS:
	-	2 . 1 Self Inductance and Mutual Inductance
	5 th	Tutorial
	1 st	2 . 2 Conductively coupled circuit and mutual impedance 2 . 3 Dot convention
	±	2. 4 Coefficient of coupling
	2 nd	2 . 5 Series and parallel connection of coupled inductors.
3 rd	3 rd	2. 6 Solve numerical problems (Contd.)
	4 th	2 . 6 Solve numerical problems
	5 th	
	1 st	
	1	3. CIRCUIT ELEMENTS AND ANALYSIS:
	- nd	3 . 1 Active, Passive, Unilateral & bilateral, Linear & Non linear elements
4 th	2 nd	3 . 2 Mesh Analysis, Mesh Equations by inspection
	3 rd	3 . 3 Super mesh Analysis
	4 th	3 . 4 Nodal Analysis, Nodal Equations by inspection
	5 th	Tutorial
	1 st	3 . 5 Super node Analysis. 3 . 6 Source Transformation Technique
	2 nd	3.7 Solve numerical problems (With Independent Sources Only)
5 th	3 rd	4. NETWORK THEOREMS:
5		4.1 Star to delta and delta to star transformation
	4 th	4.2 Super position Theorem
	5 th	Tutorial
	1 st	4.3 Thevenin's Theorem
	2 nd	4.4 Norton's Theorem
6 th	3 rd	4.5 Maximum power Transfer Theorem.
	4 th	4.6 Solve numerical problems (With Independent Sources Only)(Contd.)
	5 th	Tutorial
	1st	4.6 Solve numerical problems (With Independent Sources Only)(Contd.)
	2 nd	4.6 Solve numerical problems (With Independent Sources Only)
	3 rd	5. AC CIRCUIT AND RESONANCE:
7 th	J. J	5.1 A.C. through R-L, R-C & R-L-C Circuit
,	4 th	5.2 Solution of problems of A.C. through R-L, R-C & R-L-C series Circuit by complex algebra
		method.
	5 th	Tutorial
8 th	1 st	5.3 Solution of problems of A.C. through R-L, R-C & R-L-C parallel & Composite Circuits
	2 nd	5.4 Power factor & power triangle.
	3 rd	5.5 Deduce expression for active, reactive, apparent power.
	4 th	5.6 Derive the resonant frequency of series resonance and parallel resonance circuit
	4 5 th	Tutorial

	1 st	5.7 Define Bandwidth, Selectivity & Q-factor in series circuit.
	2 nd	5.8 Solve numerical problems
41	3 rd	6. POLYPHASE CIRCUIT
9 th	5	6.1 Concept of poly-phase system and phase sequence
	4 th	6.2 Relation between phase and line quantities in star & delta connection
	5 th	Tutorial
	1 st	6.3 Power equation in 3-phase balanced circuit
	2 nd	6.4 Solve numerical problems
10 th	3 rd	6.5 Measurement of 3-phase power by two wattmeter method.
10	5 4 th	6.6 Solve numerical problems.
	4 5 th	
	5 1 st	Tutorial
	1	7. TRANSIENTS
	2 nd	7.1 Steady state & transient state response. (Contd.)
11 th	2 3 rd	7.1 Steady state & transient state response
	3 4 th	7.2 Response to R-L, R-C & RLC circuit under DC condition. (Contd.)
	4 5 th	7.2 Response to R-L, R-C & RLC circuit under DC condition.
		Tutorial
	1 st	7.3 Solve numerical problems(Contd.)
	2 nd	7.3 Solve numerical problems
12 th	3 rd	8. TWO-PORT NETWORK
	4 th	8.1 Open circuit impedance (z) parameters
	4*** 5 th	8.2 Short circuit admittance (y) parameters
		Tutorial
	1 st	8.3 Transmission (ABCD) parameters
- th	2 nd	8.4 Hybrid (h) parameters.
13 th	3 rd	8.5 Inter relationships of different parameters.
	4 th	8.6 T and π representation.
	5 th	Tutorial
	1 st	8.7 Solve numerical problems
	2 nd	8.7 Solve numerical problems
	3 rd	9. FILTERS:
14 th		9.1 Define filter
14	4 th	9.2 Classification of pass Band, stop Band and cut-off frequency
	4	9.3 Classification of filters.
		 9.4 Constant – K low pass filter. 9.5 Constant – K high pass filter.
	5 th	Tutorial
	1 st	9.6 Constant – K Band pass filter.
	2 nd	9.7 Constant – K Band elimination filter.
15 th	3 rd	9.8 Solve Numerical problems
	3	9.8 Solve Numerical problems
	4 5 th	Tutorial
	<u> </u>	Revision Class
	2 nd	
16 th	2 rd	Revision Class
10	-	Revision Class
	4 th	Revision Class
	5 th	Revision Class
	1 st	Revision Class
c -th	2 nd	Revision Class
17 th	3 rd	Revision Class
	4 th	Revision Class
	5 th	Revision Class

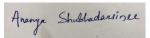


Signature of the Faculty

ACADEMIC LESSON PLAN OF WINTER 2023

Discipline: ELECTRICAL	Semester: 3 rd Sem (SEC-B)	Name of the Teaching Faculty: ANANYA SHUBHADARSINEE
Subject: TH-1	No. of days/per	Semester From: 1 st Aug 2023 to 30 th Nov 2023
(CIRCUIT &	week class allotted:	No. of Weeks: 17 weeks
NETWORK	4p/week	
THEORY)	No. Tutorial period	
	1p/week	
	1 st	1.MAGNETIC CIRCUITS
1 st		1.1 Introduction
	2 nd	1.2 Magnetizing force, Intensity, MMF, flux and their relations
	3 rd	1.3 Permeability, reluctance and permeance
	4 th	1.4 Analogy between electric and Magnetic Circuits
	5 th	Tutorial
	1 st	1.5 B-H Curve
	2 nd	1.6 Series & parallel magnetic circuit.
and	3 rd	1.7 Hysteresis loop
2 nd	4 th	2.COUPLED CIRCUITS:
		2.1 Self Inductance and Mutual Inductance
	5 th	Tutorial
	1 st	2 . 2 Conductively coupled circuit and mutual impedance 2 . 3 Dot convention
		2.4 Coefficient of coupling
rd	2 nd	2.5 Series and parallel connection of coupled inductors.
3 rd	3 rd	2 . 6 Solve numerical problems (Contd.)
	4 th	2 . 6 Solve numerical problems
	5 th	Tutorial
	1 st	3. CIRCUIT ELEMENTS AND ANALYSIS:
	-	3 . 1 Active, Passive, Unilateral & bilateral, Linear &Non linear elements
41	2 nd	3. 2 Mesh Analysis, Mesh Equations by inspection
4 th	3 rd	3 . 3 Super mesh Analysis
	3	3. 4 Nodal Analysis, Nodal Equations by inspection
	5 th	Tutorial
	1 st	3 . 5 Super node Analysis. 3 . 6 Source Transformation Technique
	2 nd	3 . 7 Solve numerical problems (With Independent Sources Only)
*6	3 rd	4. NETWORK THEOREMS:
5 th	5	4.1 Star to delta and delta to star transformation
	4 th	4.2 Super position Theorem
	5 th	Tutorial
	1 st	4.3 Thevenin's Theorem
	2 nd	4.4 Norton's Theorem
6 th	3 rd	4.5 Maximum power Transfer Theorem.
C C	4 th	4.6 Solve numerical problems (With Independent Sources Only)(Contd.)
	5 th	Tutorial
		4.6 Solve numerical problems (With Independent Sources Only)(Contd.)
	2 nd	4.6 Solve numerical problems (With Independent Sources Only)(Conta.)
	3 rd	5. AC CIRCUIT AND RESONANCE:
7 th	5	5.1 A.C. through R-L, R-C & R-L-C Circuit
	4 th	5.2 Solution of problems of A.C. through R-L, R-C & R-L-C series Circuit by complex algebra method.
		Tutorial
8 th	1 st	5.3 Solution of problems of A.C. through R-L, R-C & R-L-C parallel & Composite Circuits
	2 nd	5.4 Power factor & power triangle.
	2 3 rd	5.5 Deduce expression for active, reactive, apparent power.
		5.6 Derive the resonant frequency of series resonance and parallel resonance circuit
	4 5 th	Tutorial
	5	

	1 st	5.7 Define Bandwidth, Selectivity & Q-factor in series circuit.
	2 nd	5.8 Solve numerical problems
9 th	3 rd	6. POLYPHASE CIRCUIT
9		6.1 Concept of poly-phase system and phase sequence
	4 th	6.2 Relation between phase and line quantities in star & delta connection
	5 th	Tutorial
	1 st	6.3 Power equation in 3-phase balanced circuit
	2 nd	6.4 Solve numerical problems
10 th	3 rd	6.5 Measurement of 3-phase power by two wattmeter method.
	4 th	6.6 Solve numerical problems.
	5 th	Tutorial
	1 st	7. TRANSIENTS
		7.1 Steady state & transient state response. (Contd.)
11 th	2 nd	7.1 Steady state & transient state response
	3 rd	7.2 Response to R-L, R-C & RLC circuit under DC condition. (Contd.)
	4 th	7.2 Response to R-L, R-C & RLC circuit under DC condition.
	5 th	Tutorial
	1 st	7.3 Solve numerical problems(Contd.)
	2 nd	7.3 Solve numerical problems
12 th	3 rd	8. TWO-PORT NETWORK
12		8.1 Open circuit impedance (z) parameters
	4 th	8.2 Short circuit admittance (y) parameters
	5 th	Tutorial
	1 st	8.3 Transmission (ABCD) parameters
	2 nd	8.4 Hybrid (h) parameters.
13 th	3 rd	8.5 Inter relationships of different parameters.
	4 th	8.6 T and π representation.
	5 th	Tutorial
	1 st	8.7 Solve numerical problems
	2 nd	8.7 Solve numerical problems
	3 rd	9. FILTERS: 9.1 Define filter
14 th	* •	9.2 Classification of pass Band, stop Band and cut-off frequency
	4 th	9.3 Classification of filters.
		9.4 Constant – K low pass filter.
	5 th	9.5 Constant – K high pass filter.
	5 1 st	Tutorial
-	2 nd	9.6 Constant – K Band pass filter. 9.7 Constant – K Band elimination filter.
15 th	2 3 rd	9.7 Constant – K Band elimination filter. 9.8 Solve Numerical problems
15	3 4 th	
-	4 5 th	9.8 Solve Numerical problems Tutorial
	5 1 st	
-	2 nd	Revision Class Revision Class
16 th	2 ' 3 rd	
10	3 4 th	Revision Class
-	4 5 th	Revision Class
	5" 1 st	Revision Class
-	2 nd	Revision Class
17 th	3 rd	Revision Class
1/ L/	3 th	Revision Class
	4 th	Revision Class
	5	Revision Class



Signature of the Faculty