GOVERNMENT POLYTECHNIC NUAPADA DEPARTMENT OF ELECTRICAL ENGINEERING

LESSON PLAN

DISCIPLINE: ELECTRICAL ENGINEERING	SEMESTER: 3 RD SEM	NAME OF THE TEACHING FACULTY: MR. MUKESH KUMAR SAHU	
SUBJECT: TH-2: CIRCUIT & NETWORK THEORY	NO. OF DAYS CLASS ALLO		SEMESTER FROM DATE: 15-09-2022 TO 22-12-2022 NO. OF WEEKS ALLOTTED: 14 WEEKS
WEEK	CLASS DAY	DATE	THEORY / PRACTICAL TOPICS
1 ST	01	15-09-2022	CIRCUIT ELEMENTS, LAWS, NETWORK ANALYSIS 3.1 Introduction to Electrical circuits Charge, Voltage, current, power and energy OHM's law, Resistance, Inductance & capacitance as parameters Types of circuit elements, Active, Passive, Unilateral
	02	16-09-2022	& bilateral, Linear & Nonlinear elements 3.2 KVL and KCL, Voltage division & current
	01	19-09-2022	division. 3.3 Mesh Analysis, Mesh Equations by inspection
	02	20-09-2022	3.3.1 Super mesh Analysis 3.4 Nodal Analysis, Nodal Equations by inspection
2 ND	03	21-09-2022	3.5 Super node Analysis 3.6 Source Transformation Technique
	04	22-09-2022	3.7 Solve numerical problems (with independent source only)
	05	23-09-2022	NETWORK THEOREMS: 4.1 Star – delta transformation
	01	26-09-2022	4.2 Super position Theorem
	02	27-09-2022	4.3 Thevenin's Theorem
	03	28-09-2022	4.4 Norton's Theorem
3 RD	04	29-09-2022	4.5 Reciprocity Theorem 4.6 Compensation Theorem
	05	30-09-2022	TUTORIALS
	01	10-10-2022	4.7 Maximum power Transfer theorem
	02	11-10-2022	4.8 Milliman's Theorem
	03	12-10-2022	MAGNETIC CIRCUITS
4 TH			1.1 Introduction
AND REAL PROPERTY.	04	13-10-2022	1.2 Magnetizing force, Intensity, MMF, flux and their relations
	05	14-10-2022	1.3 Permeability, reluctance and permeance
5 ТН	01	17-10-2022	1.4 Analogy between electric and Magnetic Circuits
	02	18-10-2022	1.5 B-H Curve
	03	19-10-2022	1.6 Series & parallel magnetic circuit
	04	20-10-2022	1.7 Hysteresis loop
	05	21-10-2022	COUPLED CIRCUITS: 2.1 Self Inductance, mutual inductance

23-10-2022 23-10-2022 23-10-convention		01	25-10-2022	2.2 Conductivaly countries
03 27-10-2022 2.4 Coefficient of coupling	6 TH			
03 27-10-2022 2.4 Coefficient of coupling		02	26-10-2022	2.3 Dot convention
04 28-10-2022 2.5 Series and parallel connection of coupled inductors		03	27-10-2022	2.4 Coefficient of coupling
101 31-10-2022 5.1 Review of A.C. through R-L, R-C & R-L-C Circuit		04	28-10-2022	2.5 Series and parallel connection of coupled
01 31-10-2022 5.1 Review of A.C. through R-L, R-C & R-L-C Circuit 5.2 Solution of problems of A.C. through R-L, R-C & R-L-C erreis Circuit 5.2 Solution of problems of A.C. through R-L, R-C & R-L-C erreis Circuit by complex 5.3 Solution of problems of A.C. through R-L, R-C & R-L-C parallel & Composite Circuits 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. 5.5 Deduce expression for active, reactive, apparent power. 5.5 Deduce expression for active, reactive, apparent power. 5.5 Deduce expression for active, reactive, apparent power. 5.5 Poduce expression for active, reactive, apparent power. 5.6 Series resonance & band width in RLC Circuit 5.7 Resonant frequency for a tank circuit. 5.8 Q factor & selectivity in series circuit. 5.8 Q factor & selectivity in series circuit. 5.9 Q factor & selectivity in series circuit. 5.1 Q factor & selectivity in series circuit. 5.			10 10 2022	inductors
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02 01-11-2022 5.2 Solution of problems of A.C. through R-L, R.C. & R-L-C series Circuit by complex algebra method. 03 02-11-2022 5.3 Solution of problems of A.C. through R-L, R.C. & R-L-C parallel & Composite Circuits 04 03-11-2022 5.4 Power factor & power triangle. 05 04-11-2022 5.5 Poduce expression for active, reactive, apparent power. 01 07-11-2022 5.5 Series resonance & band width in RLC Circuit 02 09-11-2022 5.7 Resonant frequency for a tank circuit 03 10-11-2022 5.8 Q factor & selectivity in series circuit. 04 11-11-2022 15.1 Qpen circuit impedance (x) parameters 05 14-11-2022 8.2 Short circuit admittance (y) parameters 05 15-11-2022 8.3 Transmission (ABCD) parameters 04 17-11-2022 8.5 Hybrid (h) parameters. 05 18-11-2022 8.6 Inter relationships of different parameters. 05 18-11-2022 8.7 T representation. 05 22-11-2022 8.7 T representation. 04 24-11-2022 8.7 T representation. 05 25-11-2022 7 TUTORIALS 05 25-11-2022 7 TUTORIALS 06 29-11-2022 7 TUTORIALS 07 29-11-2022 7 TUTORIALS 08 29-11-2022 7 TUTORIALS 04 01-12-2022 7 TUTORIALS 05 02-12-2022 7 TUTORIALS 07 12-2022 7 TUTORIALS 07 12-2022 7 TUTORIALS 08 12-2022 7 TUTORIALS 07 12-2022 7 TUTORIALS 08 12-2022 7 TUTORIALS 08 12-2022 7 TUTORIALS 07 12-2022 7 TUTORIALS 08 12-2022 7 TUTORIALS 08 12-2022 7 TUTORIALS 08 12-2022 7 TUTORIALS 09 12-2022 7 TUTORIALS 09 12-2022 7 TUTORIALS 09 12-2		01	31-10-2022	5.1 Review of A.C. through R-L, R-C & R-L-C
03		02		5.2 Solution of problems of A.C. through
03	7 TH		01-11-2022	R-L, R-C & R-L-C series Circuit by complex
05		03	02-11-2022	
05				R-C & R-L-C parallel & Composite Circuits
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10		05	04-11-2022	5.5 Deduce expression for active, reactive,
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			FILTERS:
	01	12-12-2022	9.1 Classification of filters.
			9.2 Filter networks.
			9.3 Equations of filter networks.
	02	13-12-2022	9.4 Classification of pass Band, stop Band and cut-
13 TH			off frequency.
			9.5 Characteristic impedance in the pass and stop
			bands
	03	14-12-2022	9.6 Constant – K low pass filter
	04	15-12-2022	9.7 Constant – K high pass filter
	05	16-12-2022	TUTORIALS
14 TH	01	19-12-2022	9.8 Constant – K Band pass filter
	02	20-12-2022	9.9 Constant – K Band elimination filler
	03	03 21-12-2022	REVISION CLASSES
			Q&A DISCUSSION
	04	22-12-2022	TUTORIALS

Blukesh Lumar Calu.

Sign. Of Faculty

Sign. Of H.O.D.

Sign. Of Academic Coordinator

Principal Govt. Polytechnic Nuapada