

GOVT. POLYTECHNIC SAMBALPUR, RENGALI		LESSON
PLAN		
ipline : ELECTRICAL EN	Semester: 3rd Sem	Name of the Teaching Faculty : SUDHANSHU SWAIN
Subject : CNT	No. of Days / per week class allotted : 05	Semester From date : 15.09.2022 To Date : 22.12.2022 No. of Weeks : 14
Week	Class Day	Topics
1ST WEEK 15.09.2022 TO 17.09.2022	15.09.2022	1.MAGNETIC CIRCUITS 1 . 1 Introduction
		1 . 2 Magnetizing force, Intensity, MMF, flux and their relations
	17.09.2022	1 . 3 Permeability, reluctance and permeance
		1 . 4 Analogy between electric and Magnetic Circuits
2ND WEEK 19.09.2022 TO 24.09.2022	19.09.2022	1 . 5 B-H Curve
	20.09.2022	1 . 6 Series & parallel magnetic circuit
	21.09.2022	1 . 7 Hysteresis loop
	23.09.2022	Numerical Problems discussion, Revision
3RD WEEK 26.09.2022 TO 01.10.2022	26.09.2022	COUPLED CIRCUITS: 2 . 1 Self Inductance and Mutual Inductance
	27.09.2022	2 . 2 Conductively coupled circuit and mutual impedance 2 . 3 Dot convention
	28.09.2022	2 . 4 Dot convention. 2.5 Coefficient of coupling
	30.09.2022	2 . 5 Series and parallel connection of coupled inductors
	01.10.2022	2 . 6 Solve numerical problems
4TH WEEK 10.10.2022 TO 15.10.2022	10.10.2022	3.CIRCUIT ELEMENTS AND ANALYSIS 3 . 1 Active, Passive, Unilateral &
	11.10.2022	3 . 2 Mesh Analysis, Mesh Equations by inspection 3 . 3 Super mesh Analysis
	12.10.2022	3 . 4 Nodal Analysis, Nodal Equations by inspection
	14.10.2022	3 . 5 Super node Analysis
	15.10.2022	3 . 6 Source Transformation Technique
5TH WEEK 17.10.2022 TO 22.10.2022	17.10.2022	3 . 7 Solve numerical problems (With Independent Sources Only)
	18.10.2022	NETWORK THEOREMS : 4.1 Star to delta and delta to star transformation
	19.10.2022	4.2 Super position Theorem
	21.10.2022	4.3 Thevenin's Theorem 4.4 Norton's Theorem
6TH WEEK 24.10.2022 TO 29.10.2022	25.10.2022	Solve numerical problems (With Independent Sources Only)
	26.10.2022	4.5 Maximum power Transfer Theorem.
	28.10.2022	Solve numerical problems (With Independent Sources Only)
	29.10.2022	AC CIRCUIT AND RESONANCE: 5.1 A.C. through R-L, R-C & R-L-C Circuit Doubt Clear Class
7TH WEEK 31.10.2022 TO 05.11.2022	31.10.2022	5.2 Solution of problems of A.C. through R-L, R-C & R-L-C series Circuit by complex algebra method.
	01.11.2022	5.3 Solution of problems of A.C. through R-L, R-C & R-L-C parallel & Composite Circuits
	02.11.2022	5.4 Power factor & power tri 5.5 Deduce expression for active, reactive, apparent power
	04.11.2022	5.6 Derive the resonant frequency of series resonance and parallel resonance
	05.11.2022	Solve numerical problems
8TH WEEK 07.11.2022 TO 12.11.2022	07.11.2022	5.7 Define Bandwidth, Selectivity & Q-factor in series circuit
		5.8 Solve numerical problems
	09.11.2022	Solve numerical problems
	11.11.2022	POLYPHASE CIRCUIT 6.1 Concept of poly-phase system and phase sequence
9TH WEEK 14.11.2022 TO 19.11.2022	14.11.2022	6.2 Relation between phase and line quantities in star & delta connection
	15.11.2022	6.3 Power equation in 3-phase balanced circuit
	16.11.2022	6.4 Solve numerical problems
	18.11.2022	6.5 Measurement of 3-phase power by two wattmeter method
	19.11.2022	Doubt Clear Class

10TH WEEK 21.11.2022 TO 26.11.2022	21.11.2022	6.6 Solve numerical problems
	22.11.2022	TRANSIENTS: 7.1 Steady state & transient state response.
	23.11.2022	7.2 Response to R-L, R-C & RLC circuit under DC condition
	25.11.2022	7.2 Response to R-L, R-C & RLC circuit under DC condition
11TH WEEK 28.11.2022 TO 03.12.2022	28.11.2022	7.2 Response to R-L, R-C & RLC circuit under DC condition
	29.11.2022	7.3 Solve numerical problems
	01.12.2022	TWO-PORT NETWORK:8.1 Open circuit Impedance (z) parameters
	02.12.2022	8.2 Short circuit admittance (y) parameters
	03.12.2022	Doubt Clear Class
12TH WEEK 05.12.2022 TO 10.12.2022	05.12.2022	8.3 Transmission (ABCD) parameters
	06.12.2022	8.4 Hybrid (h) parameters.
	08.12.2022	8.5 Inter relationships of different parameters
	09.12.2022	8.6 T and π representation.
13TH WEEK 12.12.2022 TO 17.12.2022	12.12.2022	8.7 Solve numerical problems
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	15.12.2022	FILTERS:9.1 Define filter9.2 Classification of pass Band, stop Band and cut-off frequency
	16.12.2022	9.3 Classification of filters9.4 Constant – K low pass filter.
	17.12.2022	9.5 Constant – K high pass filter.9.6 Constant – K Band pass filter
14TH WEEK 19.12.2022 TO 22.12.2022	19.12.2022	9.7 Constant – K Band elimination filter.
	20.12.2022	9.8 Solve Numerical problems
	22.12.2022	Doubt Clear Class

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15/09/22