BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK

ELECTRICAL ENGG.DEPARTMENT

LESSON PLAN

SEMESTER: 3RD (C)

SESSION – winter-(2022-23)

SUBJECT: CNT

NAME OF FACULTY: PADMINI PRADHAN

Discipline: **Electrical Engg.**	Semester: **3rd (c)**	Name of the teaching faculty: **PADMINI PRADHAN**
Subject-**CNT**	No. of Days/per week class allotted:**05PERIODS /WEEK (MON,TUE,WED,THU,FRI-1 period each)**	Semester: From Date: **15/09/2022** To Date: **22/12/2022** No. of weeks: **15 WEEKS**
Week	Class Day	Theory/Practical Topics
1st (15/09/2022-17/09/2022)	15/09/2022	1. **MAGNETIC CIRCUITS** 1.1 Introduction
	16/09/2022	1 .2 Magnetizing force, Intensity, MMF, flux and their relations
2nd (19/09/2022-24/09/2022)	19/09/2022	1 .3 Permeability, reluctance and permeance
	20/09/2022	1 .4 Analogy between electric and Magnetic Circuits
	21/09/2022	1 .5 B-H Curve
	22/09/2022	1 .6 Series & parallel magnetic circuit.
	23/09/2022	1 .7 Hysteresis loop
3rd (26/09/2022-01/10/2022)	26/09/2022	1 .6 Series & parallel magnetic circuit.
	27/09/2022	1 .7 Hysteresis loop
	28/09/2022	**2.COUPLED CIRCUIT** 2 .1 Self Inductance and Mutual Inductance 2 .2 Conductively coupled circuit and mutual impedance
	29/09/2022	2 .3 Dot convention
	30/09/2022	2 .4 Coefficient of coupling

4th (03/10/2022-08/10/2022)		**PUJA HOLIDAY**
5th (10/10/2022-15/10/2022)	10/10/2022	2 . 5 Series and parallel connection of coupled inductors. 2 . 6 Solve numerical problems
	11/10/2022	**3.CIRCUIT ELEMENTS AND ANALYSIS** 3 . 1 Active, Passive, Unilateral & bilateral, Linear & Non linear elements. 3 . 2 Mesh Analysis, Mesh Equations by inspection
	12/10/2022	3 . 3 Super mesh Analysis
	13/10/2022	3 . 4 Nodal Analysis, Nodal Equations by inspection
	14/10/2022	3 . 5 Super node Analysis.
6th (17/10/2022-22/10/2022)	17/10/2022	3 . 6 Source Transformation Technique
	18/10/2022	3 . 7Solve numerical problems (With Independent Sources Only)
	19/10/2022	**4.NETWOPRK THEOROMS** 4.1 Star to delta and delta to star transformation
	20/10/2022	4.2 Super position Theorem
	21/10/2022	**Class test 1**
7th (24/10/2022-29/10/2022)	24/10/2022	**KALI PUJA / DIWALI**
	25/10/2022	4.3Thevenin's Theorem
	26/10/2022	4.4 Norton's Theorem
	27/10/2022	4.5 Maximum power Transfer Theorem
	28/10/2022	4.6 Solve numerical problems (With Independent Sources Only)
8th (31/10/2022-05/11/2022)	31/10/2022	**5.AC CIRCUIT AND REASONANCE** 5.1A.C. through R-L, R-C & R-L-C Circuit
	01/11/2022	5.2Solution of problems of A.C. through R-L, R-C & R-L-C series Circuit by complex algebra method
	02/11/2022	5.2 Solution of problems of A.C. through R-L, R-C & R-L-C parallel & Composite circuit

	03/11/2022	5.3 Power factor & power triangle.
	04/11/2022	5.5Deduce expression for active, reactive, apparent power.
9TH (07/11/2022-12/11/2022)	07/11/2022	5.6Derive the resonant frequency of series resonance and parallel resonance circuit
	08/11/2022	**RASA PURNIMA**
	09/11/2022	5.7Define Bandwidth, Selectivity & Q-factor in series circuit.
	10/11/2022	5.8 Solve numerical problems
	11/11/2022	**6.POLYPHASE CIRCUIT** 6.1 Concept of poly-phase system and phase sequence .
10TH (14/11/2022-19/11/2022)	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
	17/11/2022	6.4 Solve numerical problems
	18/11/2022	6.5 Measurement of 3-phase power by two wattmeter method.
11TH (21/11/2022-26/11/2022)	21/11/2022	6.6 Solve numerical problems.
	22/11/2022	**7.TRANSIENTS** 7.1Steady state & transient state response.
	23/11/2022	7.2 Response to R-L, R-C & RLC circuit under DC condition.
	24/11/2022	7.2 Response to R-L, R-C & RLC circuit under DC condition.
	25/11/2022	**INTERNAL ASSESSMENT**
12TH (28/11/2022-03/12/2022)	28/11/2022	7.3Solve numerical problems
	29/11/2022	7.3Solve numerical problems

	30/11/2022	**Quiz test**
	01/12/2022	**8.TWO PORT NETWORK** 8.1Open circuit impedance (z) parameters
	02/12/2022	8.2Short circuit admittance (y) parameters
13th (05/12/2022-10/12/2022)	05/12/2022	8.3Transmission (ABCD) parameters
	06/12/2022	8.4Hybrid (h) parameters.
	07/12/2022	8.5 Inter relationships of different parameters.
	08/12/2022	8.6 T and π representation
	09/12/2022	8.7 Solve numerical problems
14th (12/12/2022-17/12/2022)	12/12/2022	**9.FILTER** 9.1 Define filter 9.2 Classification of pass band, stop Band and cut-off frequency .
	13/12/2022	9.3 Classification of filter.
	14/12/2022	9.4 Constant – K low pass filter.
	15/12/2022	9.5 Constant – K high pass filter.
	16/12/2022	**CLASS TEST 2**
15th (19/12/2022-22/12/2022)	19/12/2022	9.6 Constant – K Band pass filter.
	20/12/2022	9.7 Constant – K Band elimination filter.
	21/12/2022	9.8 Solve Numerical problems
	22/12/2022	**Revision**