BALASORE SCHOOL OF ENGINEERING, BALASORE
LESSION PLAN FOR 5th SEMESTER
SESSION – 2023(W)

BRANCH:- Electrical Engineering   **SEMESTER:-5 Th**

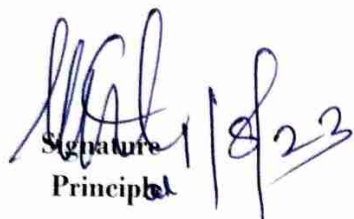**SUBJECT:-** Circuit Theory   **SUBJECT CODE – TH-03**
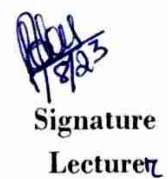
NAME OF TEACHER: - Er. T. R. DAS   **SECTION- A**

CH	DATE	Name of the Chapters (No. of periods in plan/no. of periods in syllabus)	No. of periods available as per plan	% of marks
		1. MAGNETIC CIRCUITS(5/7)		
1	2023-01-08	1 . 1 Introduction		
	2023-01-08	1 . 2 Magnetizing force, Intensity, MMF, flux and their relations		
	2023-02-08	1 . 3 Permeability, reluctance and permeance		8
	2023-05-08	1 . 4 Analogy between electric and Magnetic Circuits		
	2023-08-08	1 . 5 B-H Curve		
	2023-08-08	1 . 6 Series & parallel magnetic circuit.		
	2023-09-08	1 . 7 Hysteresis loop		
2		**2. COUPLED CIRCUITS:(4/5)**		
	2023-10-08	2 . 1 Self Inductance and Mutual Inductance		
	2023-10-08	2 . 2 Conductively coupled circuit and mutual impedance		
	2023-12-08	2 . 3 Dot convention		6
	2023-12-08	2 . 4 Coefficient of coupling	Aug(18)	
3	16/8/23	2 . 5 Series and parallel connection of coupled inductors.		
	17/8/23	2 . 6 Solve numerical problems		
		3. CIRCUIT ELEMENTS AND ANALYSIS:(9/6)		
	19/8/23	3 . 1 Active, Passive, Unilateral & bilateral, Linear & Non linear elements		
	21/8/23,22/8/23	3 . 2 Mesh Analysis, Mesh Equations by inspection		
	23/8/23	3 . 3 Super mesh Analysis		
4	24/8/23 26/8/23	3 . 4 Nodal Analysis, Nodal Equations by inspection		15
	28/8/23	3 . 5 Super node Analysis.		
	29/8/23	3 . 6 Source Transformation Technique		
	31/8/23	3 . 7 Solve numerical problems (With Independent Sources Only)		
		4. Network Theorems(7/8)		
	2023-02-09	4.1 Star to delta and delta to star transformation		
	2023-04-08	4.2 Super position Theorem		
	2023-05-08	4.3 Thevenin's Theorem		
	2023-07-08	4.4 Norton's Theorem		6

	Date	Topic	Month	Count
	2023-09-08	4.5 Maximum power Transfer Theorem.		
	11/8/23			
	12/8/23	4.6 Solve numerical problems (With Independent Sources Only)		
		5. AC CIRCUIT AND RESONANCE:(10/8)		
5	13/9/23 14/9/23	5.1 A.C. through R-L, R-C & R-L-C Circuit	Sept(17)	
	16/9/23	5.2 Solution of problems of A.C. through R-L, R-C & R-L-C series Circuit by complex algebra method.		16
	21/9/23	5.3 Solution of problems of A.C. through R-L, R-C & R-L-C parallel & Composite		
	23/9/23	5.4 Power factor & power triangle		
	25/9/23	5.5 Deduce expression for active, reactive, apparent power		
	26/9/23	5.6 Derive the resonant frequency of series resonance and parallel resonance		
	27/9/23	5.7 Define Bandwidth, Selectivity & Q-factor in series circuit.		
	28/9/23 30/9	5.8 Solve numerical problems		
6		**6. POLYPHASE CIRCUIT(6/6)**		
	2023-10-03	6.1 Concept of poly-phase system and phase sequence		
	2023-10-04	6.2 Relation between phase and line quantities in star & delta connection		
	2023-10-05	6.3 Power equation in 3-phase balanced circuit.		10
	2023-10-07	6.4 Solve numerical problems	Oct(10)	
	2023-10-09	6.5 Measurement of 3-phase power by two wattmeter method.		
	2023-10-10	6.6 Solve numerical problems.		
7		**7. TRANSIENTS:(4/6)**		
	11/10/2023 12/10/23 14/10/23 21/10/23	7.1 Steady state & transient state response		6
		7.2 Response to R-L, R-C & RLC circuit under DC condition.		
		7.3 Solve numerical problems		
8		**8. TWO-PORT NETWORK:(7/8)**		
	2023-11-01	8.1 Open circuit impedance (z) parameters		
		8.2 Short circuit admittance (y) parameters		
	2023-11-02	8.3 Transmission (ABCD) parameters		
		8.4 Hybrid (h) parameters		13
	04/11/2023 6/11/23	8.5 Inter relationships of different parameters.		
	2023-11-07	8.6 T and π representation.		
	8/11/23 9/11/23	8.7 Solve numerical problems	Nov(14)	
		9. FILTERS:(7/6)		
	2023-11-11	9.1 Define filter		
	13/11/23 14/11/23	9.2 Classification of pass Band, stop Band and cut-off frequency		
	2023-11-15	9.3 Classification of filters.		
	2023-11-16	9.4 Constant – K low pass filter.		13
	2023-11-18	9.5 Constant – K high pass filter		
	2023-11-20	9.6 Constant – K Band pass filter.		
	2023-11-20	9.7 Constant – K Band elimination filter		
	2023-11-20	9.8 Solve Numerical problems		

MONTH	PROGRESS		
AUG	CH-1,2,3		
SEPT	CH-4,5		
OCT	CH-6,7		
NOV	CH-8,9		

Signature 1/8/22
Principal

Signature
HOD

Signature
Lecturer