DISCIPLINE - ELECTRICAL	YEAR-2ND	SEMESTER- 3RD
SUBJECT- CIRCUIT AND NETWORK THEORY	THEORY PERIODS: 4P / WEEK TUTORIAL: 1 P / WEEK	NAME OF THE TEACHING FACULTY-MRS. SASHMITA BEHERA
WEEK	DAY	TOPICS
1st	1st	**3. CIRCUIT ELEMENTS AND ANALYSIS**: 3 . 1 Active, Passive, Unilateral & bilateral, Linear & Non linear elements
	2nd	Mesh Analysis, Mesh Equations by inspection
	3rd	Super mesh Analysis
	4th	Nodal Analysis, Nodal Equations by inspection
	5th	Super node Analysis.
2nd	1st	Source Transformation Technique Solve numerical problems (With Independent Sources Only)
	2nd	**4.NETWORK THEOREMS**: Star to delta and delta to star transformation
	3rd	Super position Theorem
	4th	Thevenin's Theorem
	5th	Norton's Theorem
3rd	1st	Maximum power Transfer Theorem.
	2nd	Solve numerical problems (With Independent Sources Only)
	3rd	Solve numerical problems (With Independent Sources Only)
	4th	Revision
	5th	**5. AC CIRCUIT AND** RESONANCE: A.C. through R-L, R-C & R-L-C Circuit
4th	1st	Solution of problems of A.C. through R-L, R-C & R-

		L-C series Circuit by complex algebra method. their relations
	2nd	Solution of problems of A.C. through R-L, R-C & R-L-C parallel & Composite Circuits
	3rd	Power factor & power triangle. Deduce expression for active, reactive, apparent power
	4th	Derive the resonant frequency of series resonance and parallel resonance circuit
	5th	Define Bandwidth, Selectivity & Q-factor in series circuit. Solve numerical problems.
5th	1st	**1. MAGNETIC CIRCUITS** Introduction Magnetizing force, Intensity, MMF, flux and their relations Permeability, reluctance and permeance
	2nd	Permeability, reluctance and permeance
	3rd	Analogy between electric and Magnetic Circuits
	4th	B-H Curve.
	5th	Series & parallel magnetic circuit.
6th	1st	Hysteresis loop
	2nd	Revision
	3rd	Self Inductance and Mutual Inductance. Conductively coupled circuit and mutual impedance.
	4th	Dot convention
	5th	Coefficient of coupling
7th	1st	Series and parallel connection of coupled inductors.

		Solve numerical problems
	2ND	Revision
	3RD	**6. POLYPHASE CIRCUIT** Concept of poly-phase system and phase sequence.
	4TH	Relation between phase and line quantities in star & delta connection
	5TH	Power equation in 3-phase balanced circuit.
8TH	1ST	Solve numerical problems
	2ND	Measurement of 3-phase power by two wattmeter method.
	3RD	Solve numerical problems.
	4TH	Revision
	5TH	**7. TRANSIENTS** Steady state & transient state response
9TH	1ST	Steady state & transient state response
	2ND	Solve numerical problems
	3RD	Response to R-L, R-C & RLC circuit under DC condition
	4TH	Solve numerical problems
	5TH	Revision
10TH	1ST	**8. TWO-PORT NETWORK**: 8.1 Open circuit impedance (z) parameters
	2ND	Short circuit admittance (y) parameters
	3RD	Transmission (ABCD) parameters
	4TH	Hybrid (h) parameters
	5TH	Inter relationships of different parameters.
11TH	1ST	T and π representation
	2ND	Solve numerical problems
	3RD	Revision
	4TH	**9. FILTERS:** Define filter Classification of pass

		Band, stop Band and cut-off frequency.
	5TH	Classification of filters.
12TH	1ST	Constant – K low pass filter.
	2ND	Constant – K high pass filter.
	3RD	Constant – K Band pass filter
	4TH	Constant – K Band elimination filter.
	5TH	Solve Numerical problems

DISCIPLINE - ELECTRICAL	YEAR-3RD	SEMESTER- 5TH
SUBJECT- ENTREPRENEURSHIP AND MANAGEMENT & SMART TECHNOLOGY	THEORY PERIODS: 4P / WEEK	NAME OF THE TEACHING FACULTY-MRS. SASHMITA BEHERA
WEEK	DAY	TOPICS
1st	1st	Entrepreneurship Concept /Meaning of Entrepreneurship
	2nd	Need of Entrepreneurship
	3rd	Characteristics, Qualities and Types of entrepreneur, Functions
	4th	Barriers in entrepreneurship
	5th	Entrepreneurs vrs. Manager
2nd	1st	Forms of Business Ownership: Sole proprietorship, partnership forms and others
	2nd	Types of Industries, Concept of Start-ups
	3rd	Entrepreneurial support agencies at National, State, District Level(Sources): DIC, NSIC,OSIC, SIDBI, NABARD, Commercial Banks, KVIC etc.
	4th	Technology Business Incubators (TBI) and Science and Technology Entrepreneur Parks
	5th	Revision
3rd	1st	**Market Survey and Opportunity Identification (Business Planning)** Business Planning
	2nd	SSI, Ancillary Units, Tiny

		Units, Service sector Units (With Independent Sources Only)
	3rd	Time schedule Plan
	4th	Agencies to be contacted for Project Implementation
	5th	Assessment of Demand and supply
4th	1st	Potential areas of Growth s
	2nd	Identifying Business Opportunity
	3rd	Final Product selection
	4th	Revision
	5th	**Project report** Preparation Preliminary project report
5th	1st	Detailed project report
	2nd	Techno economic Feasibility
	3rd	Project Viability
	4th	**Management Principles** Definitions of management
	5th	Principles of management
6th	1st	Functions of management (planning, organising, staffing, directing and controlling etc.
	2nd	Level of Management in an Organisation
	3rd	Revision
	4th	Dot convention
	5th	Coefficient of coupling
7th	1st	Series and parallel connection of coupled inductors. Solve numerical problems
	2ND	Revision
	3RD	**6. POLYPHASE CIRCUIT**

		Concept of poly-phase system and phase sequence.
	4TH	Relation between phase and line quantities in star & delta connection
	5TH	Power equation in 3-phase balanced circuit.
8TH	1ST	Solve numerical problems
	2ND	Measurement of 3-phase power by two wattmeter method.
	3RD	Solve numerical problems.
	4TH	Revision
	5TH	**7. TRANSIENTS** Steady state & transient state response
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	3RD	Response to R-L, R-C & RLC circuit under DC condition
	4TH	Solve numerical problems
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	2ND	Short circuit admittance (y) parameters
	3RD	Transmission (ABCD) parameters
	4TH	Hybrid (h) parameters
	5TH	Inter relationships of different parameters.
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	3RD	Constant – K Band pass filter
	4TH	Constant – K Band elimination filter.
	5TH	Solve Numerical problems