Lesson Plan

Name of Faculty : Sahil Arora
Discipline : BTech ECE
Semester : III
Subject : Digital Electronics (ECE-209-L)
Lesson Plan Duration: 15 weeks per week (in hours): **Lectures 04 hours**.

Week	Theory		Actual Covered
	Lecture	**Topic (Including Assignment/Test)**	
1st	1	Digital signal, Error detection and correction codes.	
	2	logic gates: AND, OR, NOT, NAND	
	3	NOR, EX-OR, EX-NOR	
	4	Boolean algebra	
2nd	5	Review of Number systems	
	6	Binary codes: BCD, Excess-3, Gray	
	7	EBCDIC, ASCII	
	8	Error detection and correction codes	
3rd	9	Design using gates	
	10	Karnaugh map	
	11	Problems on K map	
	12	Problems and Solutions on K map	
4th	13	Quine Mcluskey methods of simplification	
	14	Circuit desig using gates, adder,subtractor, comparator	
	15	BCD to seven segmant , code converters	
	16	MUX and DEMUX :use as logic elements	
5th	17	Decoders, Encoder	
	18	Adders / Subtractors	
	19	BCD arithmetic circuits	
	20	Flip Flops : S-R, J-K	
6th	21	T, D ff	
	22	master-slave, edge triggered, flip flop conversion	
	23	shift registers,bidirectional shift registers	
	24	sequence generators	
7th		----------**Ist Minor Test**----------	
8th	25	Ring Counters	
	26	Johnson Counter	
	27	Design of Synchronous and Asynchronous sequential circuits	
	28	Assignment questions	
9th	29	Finite state Machines-Timing Diagram, Moorey vs Mealy	
	30	FSM design procedure,state diagram	
	31	State transition table,state minimization	
	32	State encoding, next state logic minimization	
10th	33	Implement the design	
	34	Problems and Solutions	
	35	Switching mode operation of p-n junction	
	36	bipolar and MOS. devices	
11th	37	Bipolar logic families:RTL, DTL, DCTL	
	38	HTL, TTL, ECL, MOS	
	39	CMOS logic families	
	40	Tristate logic	
12th	41	Interfacing of CMOS and TTL families.	
	42	Sample and hold circuit	
	43	weighted resistor and R -2 R ladder D/A Converter	
	44	specifications for D/A converters. A/D converters : Quantization, parallel - comparator	
13th	45	successive approximation type	
	46	counting type, dual-slope ADC, specifications of ADCs	
	47	ROM	
	48	PLA, PAL	
14th		----------**2nd Minor Test**----------	
15th	49	FPGA	
	50	Assignment Evaluation	
	51	CPLDs	
	52	Implementation of Combinational circuit using ROM,PLA,PAL	

Lesson Plan

Name of Faculty : Vikram Singh Bhambhu, Guest Lecturer(ECE)
Discipline : Electronics & Communication Engg.
Semester : 3rd
Subject : Analog Electronics
Lesson Plan Duration: 15 weeks (from August, 2018 to December, 2018)
Work Load (Lectutre/Practical) per week (in hours): **Lectures 04 hours**

Week	Theory	
	Lecture Day	Topic
1st	1	Introduction to Analog electronics
	2	P-N junction theory
	3	P-N junction V-I Characteristics
	4	P-N junction as a rectifier
2nd	5	Switching characteristics of Diode
	6	Diode as a circuit element
	7	The load-line concept
	8	Half-wave and full wave rectifiers
3rd	9	Clipping circuits
	10	Clamping circuits
	11	Filter circuits
	12	Peak to peak detector
4th	13	Voltage multiplier circuits
	14	Bipolar junction transistor operation
	15	Bipolar junction transistor characteristics
	16	Ebers-moll model of transistor
5th	17	Hybrid model
	18	H-parameters (CE, CB, CC configurations)
	19	Analysis of a transistor amplifier circuits using h-parameters
	20	Emitter follower
6th	21	Miller's Theorem
	22	Frequency response of R-C coupled amplifier
	23	Operating point
	24	Bias stability
7th		**Minor Test 1**
8th	25	Collector to base bias
	26	Self-bias
	27	Emitter bias
	28	Bias compensation
9th	29	Sensistor compensation
	30	Thermistor compensation
	31	Hybrid P model
	32	CE short circuit current gain
10th	33	Frequency response
	34	Alpha
	35	Cutoff frequency
	36	Gain bandwidth product
11th	37	Emitter follower at high frequencies.
	38	Junction field effect transistor
	39	Pinch off voltage
	40	Volt-ampere characteristics
12th	41	Small l signal model
	42	MOSFET Enhancement mode
	43	MOSFET Depletion mode
	44	V-MOSFET
13th	45	Common source amplifier
	46	Source follower
	47	Biasing of FET
	48	Applications of FET as a voltage variable resistor (V V R).
14th		**Minor Test 2**
15th	49	Series and shunt voltage regulators
	50	Power supply parameters
	51	Three terminal IC regulators
	52	SMPS

Vikram Singh Bhambhu

Guest Lecturer (ECE)

Lesson Plan

Name of Faculty : Poonam
Discipline : BTech CSE
Semester : III
Subject : Digital Electronics (EE-204-E)
Lesson Plan Duration: 15 weeks
Work Load (Lecture/Practical) per week (in hours): **Lectures 04 hours**.

Week	Theory		Actual Covered
	Lecture Day	**Topic (Including Assignment/Test)**	
1st	1	Digital signal, EBCDIC, ASCII, Error detection and correction codes.	
	2	logic gates: AND, OR, NOT, NAND	
	3	NOR, EX-OR, EX-NOR	
	4	Boolean algebra	
2nd	5	Review of Number systems	
	6	Binary codes: BCD, Excess-3, Gray	
	7	EBCDIC, ASCII	
	8	Error detection and correction codes	
3rd	9	Design using gates	
	10	Karnaugh map	
	11	Problems on K map	
	12	Problems and Solutions on K map	
4th	13	Quine Mcluskey methods of simplification	
	14	Problems on Quine Mcluskey methods of simplification	
	15	Discussion on K map and Quine Mcluskey methods of simplification	
	16	Multiplexers	
5th	17	Demultiplexers	
	18	MUX and DEMUX :use as logic elements	
	19	Decoders	
	20	Adders / Subtractors	
6th	21	BCD arithmetic circuits	
	22	Encoder	
	23	Decoders / Drivers for display devices	
	24	Problems and Solutions	
7th		----------**Ist Minor Test**----------	
8th	25	Flip Flops : S-R, J-K	
	26	T, D ff	
	27	master-slave, edge triggered	
	28	shift registers,	
9th	29	Assignment questions	
	30	sequence generators	
	31	Counters	
	32	Asynchronous and Synchronous Ring counters	
10th	33	Johnson Counter	
	34	Design of Synchronous and Asynchronous sequential circuits	
	35	Switching mode operation of p-n junction	

	36	bipolar and MOS. devices	
11th	37	Bipolar logic families:RTL, DTL, DCTL	
	38	HTL, TTL, ECL, MOS	
	39	CMOS logic families	
	40	Tristate logic	
12th	41	Interfacing of CMOS and TTL families.	
	42	Sample and hold circuit	
	43	weighted resistor and R -2 R ladder D/A Converter	
	44	specifications for D/A converters. A/D converters : Quantization, parallel - comparator	
13th	45	successive approximation type	
	46	counting type, dual-slope ADC, specifications of ADCs	
	47	ROM	
	48	PLA, PAL	
14th		----------**2nd Minor Test**----------	
15th	49	FPGA	
	50	Assignment Evaluation	
	51	CPLDs	
	52	Problems and Solutions	

Lesson Plan

Name of Faculty : Gourav Sharma, Guest Faculty
Discipline : Mechanical Engg.
Semester : 3rd
Subject : Instrumentation (ECE-211-L)
Lesson Plan Duration: 15 weeks (from August, 2018 to November, 2018)
Work Load (Lectutre): per week (in hours): **Lectures 03 hours**.

Week	Theory	
	Lecture Day	Topic (Including Assignment/Test)
Unit1		
1st	1	Introduction & Application of instrument system
	2	Functional Element of a Measurement System
	3	Classification of instruments, Standard & Calibration
2nd	4	Static & Dynamic Characteristics of Inst. , Precision & Accuracy.
	5	Resolution , Threshold, Sensitivity, Linearity
	6	Hysteresis, Dead Band, backlash, Drift
3rd	7	Formulation of Differential Equation
	8	Zero, First and Second Order System
	9	Response of First & Second Order System to Step , Ramp Fn.
4th	10	Response of First & Second Order System to Impulse and Harmonic
	11	**Unit-II** Block Diagram of Oscilloscope &Study of Various stages
	12	High Freq CRO & Sampling & Storage Oscilloscope
5th	13	Measurement of Phase & Freq.
	14	DC & AC voltage Measurement
	15	DC & AC current Measurement & Assignment 1
6th	16	Multi-meter, Ohmmeter & Bolometer
	17	Calorimeter & Power meter
	18	Introduction to Digital Meter
7th	**1st Minor Test**	
Unit 3		
8th	19	Block Diagram of Pulse Generator
	20	Signal & Function Generator
	21	Wave analyser
9th	22	Distortion & Specturm analyser
	23	Harmonic analyser
	24	Power Analyser
10th	25	Study of Decade Counting Assembly
	26	Freq. & Period Measurement
	27	Universal Counter & Introduction to Digital Meter
Unit 4		
	28	Classification of Transducer

11th	29	RLC & Photocell Transducer
	30	Measurement of Displacement & Velocity
12th	31	Measurement of Acceleration
	32	Measurement of Strain & Pressure
	33	Measurement of Liquid Level & Temp.
13th	34	DC signal Conditioning System
	35	AC signal Conditioning System
	36	Data Acquisition & Conversion system
14th	**2nd Minor Test**	
15th	37	Characteristics of Modern digital Acquisition System Amplifier Characteristics
	38	Filter & Assignment 2
	39	Settling time & Amplifier Characteristics

Gourav Sharma
Guest Faculty
E.C.E.Department

Lesson Plan

Name of Faculty : Gourav Sharma, Guest Faculty
Discipline : Electronics & Communication Engg.
Semester : 7th
Subject : Optical Communication (EE-405E)
Lesson Plan Duration: 15 weeks (from August, 2018 to November, 2018)
Work Load (Lecturer) : Per week (in hours): **Lectures 04 hours**.

Week	Theory	
	Lecture Day	Topic (Including Assignment/Test)
1st	1	Electromagnetic spectrum used for optical communication
	2	Block diagram of optical communication system
	3	Basics of transmission of light rays
	4	Advantages of optical fiber communication
2nd	5	Optical fibers structures and their types
	6	Attenuation
	7	Scattering
	8	Absorption
3rd	9	Fiber Bend Loss
	10	Dispersion
	11	Fiber Coupler
	12	Connector
4th	13	Problem & Solution of 1st Unit
	14	Problem & Solution of 2nd Unit
	15	Light emitting diode
	16	Recombination processes
5th	17	The spectrum of recombination radiation
	18	LED characteristics
	19	Internal quantum efficiency
	20	External quantum efficiency
6th	21	LED structure
	22	Lens coupling to fiber
	23	Behavior at high frequencies.
	24	Problem & Solution of 3rd Unit
7th	**1st Minor Test**	
8th	25	Basic principles of laser action in semi -conductors
	26	optical gain,
	27	lasing threshold
	28	Assignment 1
9th	29	laser structures and characteristics
	30	laser to fiber coupling
	31	Comparison with LED source.
	32	Problems and Solution of 4th Unit

10th	33	Principles of optical detection
	34	Quantum efficiency, Responsivity
	35	General principles of PIN photodetector
	36	Intrinsic absorption
11th	37	Materials and designs for PIN photodiodes, ,
	38	Impulse and frequency response of PIN photodiodes
	39	Noise in PIN Photodiodes
	40	Problems and Solution
12th	41	multiplication process
	42	APD Design,
	43	APD bandwidth,
	44	APD noise
13th	45	Assignment-II
	46	Revision & Problem Solving of 1st Unit
	47	Revision & Problem Solving of 2nd Unit
	48	Revision & Problem Solving of 2nd Unit
14th	**2nd Minor Test**	
15th	49	Revision & Problem Solving of 3rd Unit
	50	Revision & Problem Solving of 4th Unit
	51	Revision & Problem Solving of 5th Unit
	52	Revision & Problem Solving of 5th Unit

Lesson Plan

Name of Faculty : Rupinder Kaur, Assistant Professor
Discipline : ECE
Semester : IIIrd
Subject : **SIGNALS AND SYSTEMS (ECE-203-L)**
Lesson Plan Duration: 15 weeks (From July 2018 to Dec. 2018)
Work Load (Lectutre/Practical) per week (in hours): Lectures: 04

Week	Theory	
	Lecture Day	Topic (Including Assignment/Test)
1st	1	Signal Definition
	2	Classification of Signals
	3	Basic/Singularity
	4	Continuous and Discrete time signals
2nd	5	Basic operations of signals
	6	Time Shifting
	7	Time Reversel
	8	Time Scaling
3rd	9	Signal Representaion in terms of singular functions
	10	Correlation of Signals
	11	Correlation Properties
	12	Representation of a continuous time signal by samples
4th	13	The Sampling Theorem
	14	Reconstruction of signal from its samples
	15	Aliasing
	16	Introduction to Systems
5th	17	Classification of Systems
	18	Linear and Non linear Systems
	19	Static and Dynamic Systems
	20	Casual & Non-casual Systems
6th	21	Invertible & Non invertible Systems
	22	Stable & Unstable Systems
	23	Time variant & Time invariant Systems
	24	Assignment I
7th		**.....Minor Test II.....**
8th	25	Introduction to Linear Time invariant Systems
	26	Properties of LTI
	27	Convulation Sum/Integral and its Properties
	28	Representation of LTI systems using Differential equations
9th	29	Representation of LTI systems using Difference equations
	30	Introduction to Frequency Domain Representaion
	31	Fourier Series Representation of Periodic Signals

	32	Convergence of Fourier Transform
10th	33	Properties of Fourier Series
	34	Fourier Transform for Periodic Signals
	35	Fourier Transform for Aperiodic Signals
	36	Convergence of Fourier Transform
11th	37	Properties of Fourier Transform
	38	Applications of Fourier Transform
	39	Introduction to Discrete -Time Fourier Transform
	40	Fourier Transform representation for Discrete - Time Aperiodic Signals
12th	41	Fourier Transform representation for Discrete - Time Periodic Signals
	42	Properties of Discrete -Time Fourier Transform
	43	Basic Fourier Transform Pairs
	44	Introduction to Z - Transform
13th	45	Region of Convergence for Z - Transform
	46	Assignment II
	47	Z – Transform Properties
	48	Problems and Solutions
14th	**.....Minor Test II.....**	
15th	49	Analysis of LTI Systems using Z – Transform
	50	Applications of Z - Transform
	51	Inverse Z – Transform
	52	Introduction to Hilbert Transform

Lesson Plan

Name of Faculty : SAHIL ARORA, Assistant Professor (ECE)

Discipline : ECE 3RD SEM

Subject : DIGITAL ELECTRONICS (ECE-209-L)

Lesson Plan Duration: 15 weeks (From July 2018 to Dec. 2018) 4 LECT PER WEEK.

Week	Theory	
	Lecture	Topic (Including Assignment/Test)
1st	1	Digital signal, Error detection and correction codes.
	2	logic gates: AND, OR, NOT, NAND
	3	NOR, EX-OR, EX-NOR
	4	Boolean algebra
2nd	5	Review of Number systems
	6	Binary codes: BCD, Excess-3, Gray
	7	EBCDIC, ASCII
	8	Error detection and correction codes
3rd	9	Design using gates
	10	Karnaugh map
	11	Problems on K map
	12	Problems and Solutions on K map
4th	13	Quine Mcluskey methods of simplification
	14	Circuit desig using gates, adder,subtractor, comparator
	15	BCD to seven segmant , code converter\
	16	MUX and DEMUX :use as logic elements
5th	17	Decoders, Encoder
	18	Adders / Subtractors
	19	BCD arithmetic circuits

	20	Flip Flops : S-R, J-K
6th	21	T, D ff
	22	master-slave, edge triggered, flip flop conversion
	23	shift registers,bidirectional shift registers
	24	sequence generators
7th		----------Ist Minor Test----------
8th	25	Ring Counters
	26	Johnson Counter
	27	Design of Synchronous and Asynchronous sequential circuits
	28	Assignment questions
9th	29	Finite state Machines-Timing Diagram, Mooreyvs Mealy
	30	FSM design procedure,state diagram
	31	State transition table,state minimization
	32	State encoding, next state logic minimization
10th	33	Implement the design
	34	Problems and Solutions
	35	Switching mode operation of p-n junction
	36	bipolar and MOS. devices
11th	37	Bipolar logic families:RTL, DTL, DCTL
	38	HTL, TTL, ECL, MOS
	39	CMOS logic families
	40	Tristate logic
12th	41	Interfacing of CMOS and TTL families.
	42	Sample and hold circuit
	43	weighted resistor and R -2 R ladder D/A Converter
	44	specifications for D/A converters. A/D converters : Quantization, parallel - comparator
13th	45	successive approximation type\
	46	counting type, dual-slope ADC, specifications of ADCs
	47	ROM
	48	PLA, PAL
14th		----------2nd Minor Test----------
15th	49	FPGA
	50	Assignment Evaluation
	51	CPLDs
	52	Implementation of Combinational circuit using ROM,PLA,PAL

Lesson Plan

Name of Faculty : **RupinderKaur, Assistant Professor (ECE)**

Discipline **: ECE 3RD SEM**

Subject : **SIGNALS AND SYSTEMS (ECE-203-L)**

Lesson Plan Duration: **15 weeks (From July 2018 to Dec. 2018) 4 LECT PER WEEK.**

Week	Theory	
	Lecture Day	Topic (Including Assignment/Test)
1st	1	Signal Definition
	2	Classification of Signals
	3	Basic/Singularity
	4	Continuous and Discrete time signals
2nd	5	Basic operations of signals
	6	Time Shifting
	7	Time Reversel
	8	Time Scaling
3rd	9	Signal Representaion in terms of singular functions
	10	Correlation of Signals

	11	Correlation Propertie
	12	Representation of a continuous time signal by samples
4th	13	The Sampling Theorem
	14	Reconstruction of signal from its samples
	15	Aliasing
	16	Introduction to Systems
5th	17	Classification of Systems
	18	Linear and Non linear Systems
	19	Static and Dynamic Systems
	20	Casual & Non-casual Systems
6th	21	Invertible & Non invertible Systems
	22	Stable & Unstable Systems
	23	Time variant & Time invariant Systems
	24	Assignment I
7th		.....Minor Test II.....
8th	25	Introduction to Linear Time invariant Systems
	26	Properties of LTI
	27	Convulation Sum/Integral and its Properties
	28	Representation of LTI systems using Differential equations
9th	29	Representation of LTI systems using Difference equations
	30	Introduction to Frequency Domain Representaion
	31	Fourier Series Representation of Periodic Signals
	32	Convergence of Fourier Transform
10th	33	Properties of Fourier Series
	34	Fourier Transform for Periodic Signals
	35	Fourier Transform for Aperiodic Signals
	36	Convergence of Fourier Transform
11th	37	Properties of Fourier Transform
	38	Applications of Fourier Transform
	39	Introduction to Discrete -Time Fourier Transform
	40	Fourier Transform representation for Discrete - Time Aperiodic Signals
12th	41	Fourier Transform representation for Discrete - Time Periodic Signals
	42	Properties of Discrete -Time Fourier Transform
	43	Basic Fourier Transform Pairs
	44	Introduction to Z - Transform
13th	45	Region of Convergence for Z - Transform
	46	Assignment II
	47	Z – Transform Properties
	48	Problems and Solutions
14th	.....Minor Test II.....	
15th	49	Analysis of LTI Systems using Z – Transform
	50	Applications of Z - Transform

	51	Inverse Z – Transform
	52	Introduction to Hilbert Transform

LESSON PLAN

Name of Faculty : Poonam

Discipline :BTech ECE 3RD SEM

Subject : Network analysis and synthesis (ECE-207-L)

Lesson Plan Duration :15 weeksWork Load (Lecture/Practical) per week (in hours): Lectures 04 hours

Week	Theory	
	Lecture Day	Topic (Including Assignment/Test)

1st	1	Introduction to laplace transformation
	2	Properties of Laplace transformation
	3	Laplace transform of special signal waveforms
	4	Inverse laplace transform
2nd	5	Use of laplace transform in solving electrical networks
	6	Problems and solution on laplace transform
	7	Initial conditions of resistive,inductive and capacitive elements
	8	Time domain analysis of simple linear circuits
3rd	9	Transient and steady state response of RC,RL,RLC Circuit to step signal using laplace transform
	10	Transient and steady state response of RC,RL,RLC Circuit to ramp signal using laplace transform
	11	Transient and steady state response of RC,RL,RLC Circuit to impulse signal using laplace transform
	12	Transient and steady state response of RC,RL,RLC Circuit to sinusoidal signal using laplace transform
4th	13	Problems and solutions
	14	Terminal pairs or Ports
	15	Network functions for one-port and two-port networks
	16	poles and zeros of Network functions
5th	17	Demultiplexers Restrictions on pole and zero Locations for driving point functions and transfer functions
	18	Time domain behavior from the pole-zero plot.
	19	Problems and solution on Time domain behavior from the pole-zero plot.
	20	Relationship of two-port variables
6th	21	short-circuit Admittance parameters, open circuit impedance, parameters
	22	Transmission parameters, hybrid parameters
	23	Relationships between parameter sets
	24	Inter-connection of two port networks.
7th		----------Ist Minor Test----------
8th	25	Concept of network graph
	26	Terminology used in network graph
	27	Relationship between twigs and links
	28	Properties of tree in a graph
9th	29	Assignment questions
	30	Formation of incidence matrix,number of trees in a graph
	31	Cut set matrix
	32	Tie set matrix
10th	33	Formulation of network equilibrium equation
	34	network analysis using graph theory
	35	Intoduction to filters,characteristics of filters
	36	bipolar and MOS. devices
	37	Bipolar logic families:RTL, DTL, DCTL
	38	Passive filter:HPF

11th	39	LPF
	40	BPF
12th	41	BSF
	42	Introduction to m derived filters
	43	Introduction to active filters
	44	Concept and significance of positive real functions
13th	45	Concept of network synthesis
	46	Driving point immittance function structure of RC Network
	47	Driving point immittance function structure of RL Network
	48	Foster form of RCnetwork
14th		----------2nd Minor Test----------
15th	49	Foster form of RCnetwork
	50	Assignment Evaluation
	51	CAUER form of RCnetwork
	52	CAUER form of RCnetwork

Lesson Plan

Name of Faculty : Ms.Poonam, Assistant Professor of ECE

Discipline :ECE 3RD SEM

Subject : Network analysis and synthesis lab(ECE-207P)

Lesson Plan Duration :15 weeks (from august-2018 to 14ecember-2018)Practical-02 hours

Week	Practical (Group-I/ II)	
	Practical Day	Topics/ Programs
1st	1	Transient Response of RC circuit
2nd	2	Transient Response of Rl circuit
3rd	3	To find the resonance frequency, Bandwidth of RLC series circuit
4th	4	To calculate and verify z parameters of two port network
5th	5	To calculate and verify y parameters of two port network
6th	6	Internal 1st viva – voce
7th	IST MINOR TEST	
8th	7	To calculate and verify ABCD parameters of two port network
9th	8	To calculate and verify H parameters of two port network
10th	9	To determine equivalent parameter of parallel connections of two port network
11th	10	To plot the frequency response of LPF and determine half power freq
12th	11	To plot the frequency response of HPF and determine half power freq
13th	12	To plot the frequency response of BPF and determine tha bandwidth
14th	2ND MINOR TEST	
15th	13	To synthesise a network of a given network function and verify its response

Lesson Plan

Name of Faculty : Vikram Singh Bhambhu, ASSISTANT PROF (ECE)

Discipline : ECE 3RD

Subject : Analog Electronics

Lesson Plan Duration: **15 weeks (from August, 2018 to December, 2018)Lectures 04 hours**

Week	Theory	
	Lecture Day	Topic
1st	1	Introduction to Analog electronics
	2	Conductivity of semiconducator
	3	Carrier concentration in an intrinsic semiconductor
	4	Fermilevel in intrinsic and extrinsic semiconductor
2nd	5	Carrier life time
	6	Continuity Equation
	7	Hall effect
	8	Qualitative theory of pn junction
3rd	9	Pn junction as adiode
	10	Band structure of an open circuited pn junction
	11	Current component in pn diode
	12	PN diode switching time, tunnel diode
4th	13	Rectifier with filter circuit
	14	BJT construction opertation
	15	Characterstics ,Ebbers moll model
	16	BJT as an amplifier and switch
5th	17	Limits of operation, thermal runway
	18	Stability factor bias stability of self bias
	19	Emmiter bias , collector to base bias
	20	Bias compensation
6th	21	Thermistor and sensistor
	22	AC and DC Load linefor an amplifier
	23	Transistor hybrid model
	24	H parameter
7th		Minor Test 1
8th	25	Analysis of Transistor using h parameter
	26	Symplified CE hybrid model
	27	Frequency response of RC coupled Amplifier
	28	MOSFET :Review of device structure
9th	29	Operation JFET
	30	V-I Characterstics JFET
	31	Operation MOSFET
	32	V-I Characterstics MOSFET
10th	33	MOSFET as an Switch and amplifier FET small signal model
	34	V MOSFET
	35	Common source apmlifier
	36	Source follower

11th	37	Biasing the FET
	38	FET as Voltage Vrariable Resistor
	39	Miller Theorem
	40	Hybrid pi model
12th	41	CE short circuit current gain
	42	Frequency Response
	43	Beta cut-off frequency
	44	Gain bandwidth product
13th	45	Series regulator
	46	Shunt regulator
	47	Three terminal fixed IC Regulator 78xx/79xx
	48	Adjustable voltage regulator
14th	Minor Test 2	
15th	49	SMPS
	50	Revision
	51	Revision
	52	Revision

Lesson Plan

Name of Faculty : Poonam
Discipline : BTech ECE
Semester : III
Subject : Network analysis and synthesis (ECE-207-L)
Lesson Plan Duration : 15 weeks
Work Load (Lecture/Practical) per week (in hours): **Lectures 04 hours**.

Week	Theory		Actual Covered
	Lecture Day	Topic (Including Assignment/Test)	
1st	1	Introduction to laplace transformation	
	2	Properties of Laplace transformation	
	3	Laplace transform of special signal waveforms	
	4	Inverse laplace transform	
2nd	5	Use of laplace transform in solving electrical networks	
	6	Problems and solution on laplace transform	
	7	Initial conditions of resistive,inductive and capacitive elements	
	8	Time domain analysis of simple linear circuits	
3rd	9	Transient and steady state response of RC,RL,RLC Circuit to step signal using laplace transform	
	10	Transient and steady state response of RC,RL,RLC Circuit to ramp signal using laplace transform	
	11	Transient and steady state response of RC,RL,RLC Circuit to impulse signal using laplace transform	
	12	Transient and steady state response of RC,RL,RLC Circuit to sinusoidal signal using laplace transform	
4th	13	Problems and solutions	
	14	Terminal pairs or Ports	
	15	Network functions for one-port and two-port networks	
	16	poles and zeros of Network functions	
5th	17	Demultiplexers Restrictions on pole and zero Locations for driving point functions and transfer functions	
	18	Time domain behavior from the pole-zero plot.	
	19	Problems and solution on Time domain behavior from the pole-zero plot.	
	20	Relationship of two-port variables	
6th	21	short-circuit Admittance parameters, open circuit impedance, parameters	

	22	Transmission parameters, hybrid parameters	
	23	Relationships between parameter sets	
	24	Inter-connection of two port networks.	
7th		----------**Ist Minor Test**----------	
8th	25	Concept of network graph	
	26	Terminology used in network graph	
	27	Relationship between twigs and links	
	28	Properties of tree in a graph	
9th	29	Assignment questions	
	30	Formation of incidence matrix,number of trees in a graph	
	31	Cut set matrix	
	32	Tie set matrix	
10th	33	Formulation of network equilibrium equation	
	34	network analysis using graph theory	
	35	Intoduction to filters,characteristics of filters	
	36	bipolar and MOS. devices	
11th	37	Bipolar logic families:RTL, DTL, DCTL	
	38	Passive filter:HPF	
	39	LPF	
	40	BPF	
12th	41	BSF	
	42	Introduction to m derived filters	
	43	Introduction to active filters	
	44	Concept and significance of positive real functions	
13th	45	Concept of network synthesis	
	46	Driving point immittance function structure of RC Network	
	47	Driving point immittance function structure of RL Network	
	48	Foster form of RCnetwork	
14th		----------**2nd Minor Test**----------	
15th	49	Foster form of RCnetwork	
	50	Assignment Evaluation	
	51	CAUER form of RCnetwork	
	52	CAUER form of RCnetwork	