Lesson Plan

Name of the Faculty : Smt. Pooja SIndhu
Discipline : ECE
Semester : 3rd
Subject : Computer Programming Using C (4T-3P)
Lesson plan duration : 15 weeks (from July, 2018 to Nov, 2018)

Week	Theory		Practical	
	Lecture Day	Topic (including assignment)	Practical Day	Topic
1st Week	1st	Overview of syllabus, reference books, Importance and need of subject	1st – G1	Programming exercises on executing and editing a C program.
	2nd	Unit-1: Algorithm and Programming Development - Contents , Introduction, Definition, examples, applications	2nd - G2	-do-
	3rd	Steps in development of a program		
	4th	Algorithm development, examples		
Week 2	1st	Flow charts- symbols, advantages, examples	1st – G1	Programming exercises on defining variables and assigning values to variables.
	2nd	Programme Debugging	2nd - G2	-do-
	3rd	Examples of flow charts, algorithms		
	4th	Unit-2: Program Structure - Contents , Introduction, History and Importance of C language, Features, Applications		
Week 3	1st	Basic structure of C program, I/O statements	1st – G1	Programming exercises on arithmetic and relational operators.
	2nd	Assignment statements, examples, Constants, variables		
	3rd	Data types, characteristics	2nd - G2	-do-
	4th	Operators -Types		
Week 4	1st	Expressions , examples	1st – G1	Programming exercises on arithmetic expressions and their evaluation
	2nd	Standards IOS		
	3rd	Formatted IOS	2nd - G2	-do-
	4th	Data Type Casting		
Week 5	1st	Revision of Unit-2, Assignment	1st – G1	Programming exercises on formatting input/output

	2nd	Unit-3: Control Structures – Contents, Introduction, Decision making with IF – statement		using printf and scanf and their return type values.
	3rd	IF – Else and Nested IF	2nd - G2	-do-
	4th	Examples of IF – Else and Nested IF		
Week 6	1st	While and do-while, for loop-syntax, comparison	1st – G1	Programming exercises using if statement.
	2nd	Examples of While and do-while, for loop		
	3rd	Break. Continue, goto and switch statements-syntax, use	2nd - G2	-do-
	4th	Examples of Break, Continue, goto and switch statements		
Week 7	1st	Practice of programs	1st – G1	Programming exercises using if – Else.
	2nd	Revision of Unit-3, Assignment		
	3rd	Unit-4: Pointers -Introduction to Pointers	2nd - G2	-do-
	4th	Address operator and pointers,		
Week 8	1st	Declaring and Initializing pointers	1st – G1	Programming exercises on switch statement.
	2nd	Single pointer, examples		
	3rd	Revision of Unit-4, Assignment	2nd - G2	-do-
	4th	Unit-5: Functions-Introduction		
Week 9	1st	Global and Local Variables	1st – G1	Programming exercises on do – while, statement.
	2nd	Function Declaration		
	3rd	Standard functions	2nd - G2	-do-
	4th	Examples of programs		
Week 10	1st	Parameters and Parameter Passing	1st – G1	Programming exercises on for – statement.
	2nd	Call - by value/reference		
	3rd	Practice of programs	2nd - G2	-do-
	4th	Revision of Unit-5, Assignment		
Week 11	1st	Discussion of Important Questions	1st – G1	Programs on one-dimensional array.
	2nd	Unit-6: Arrays- Introduction,		

		examples		
	3rd	Array Declaration, Length of array	2nd - G2	-do-
	4th	Single and Multidimensional Array		
Week 12	1st	Examples of 2-d Arrays	1st – G1	Programs on two-dimensional array.
	2nd	Arrays of characters		
	3rd	Examples and practice of programs	2nd - G2	-do-
	4th	Writing of programs		
Week 13	1st	Passing an array to function	1st – G1	(i) Programs for putting two strings together. (ii) Programs for comparing two strings
	2nd	Examples of programs		
	3rd	Pointers to an array	2nd - G2	-do-
	4th	Practice of programs		
Week 14	1st	Discussion of Important Questions	1st – G1	Simple programs using structures.
	2nd	Revision of Unit-6, Assignment		
	3rd	Practice of programs of Unit-2	2nd - G2	-do-
	4th	Practice of programs of Unit-3		
Week 15	1st	Practice of programs of Unit-3,4	1st – G1	Simple programs using pointers, unions
	2nd	Discussion of Important Questions		
	3rd	Repetition of topics that student want to practice and doubt clearance	2nd - G2	-do-
	4th	Repetition of topics that student want to practice and doubt clearance		

LESSON PLAN

NAME OF FACULTY Manoj Kumar
DISCIPLINE Electronics and communication Engg. SEMESTER 3rd
SUBJECT Digital Electronics
LESSON PLAN DURATION: 15 weeks
WORK LOAD LECTURES - 03, PRACTICALS - 03

WEEK	THEORY		PRACTICAL	
	LECTURE DAY	TOPIC	PRACTICAL DAY	TOPIC
1st	1	Distinction between analog and digital signal, Applications and advantages of digital signals	1st	Verification and interpretation of truth tables for AND, OR, NOT NAND, NOR and Exclusive OR (EXOR) and Exclusive NOR gates
	2	Binary, octal and hexadecimal number system		
	3	conversion from decimal to binary and vice-versa		
2nd	4	conversion from decimal to binary and vice-versa	2nd	Verification and interpretation of truth tables for AND, OR, NOT NAND, NOR and Exclusive OR (EXOR) and Exclusive NOR gates
	5	conversion from hexadecimal to binary and vice-versa		
	6	conversion from hexadecimal to binary and vice-versa		
3rd	7	Binary addition and subtraction including binary points	3rd	Realisation of logic functions with the help of NAND or NOR gates
	8	Binary addition and subtraction including binary points		
	9	1's and 2's complement method of addition/subtraction		
4th	10	Concept of code, weighted and non-weighted codes	4th	To design a half adder using XOR and NAND gates and verification of its operation
	11	Examples of 8421, BCD, excess-3 and Gray code		
	12	Concept of parity, single and double parity		
5th	13	Error detection	5th	Construction of a full adder circuit using XOR and NAND gates and verify its operation
	14	Negative and positive logic, NOT, AND, OR, Gates		
	15	NAND, NOR, EXOR Gates		
6th	16	NAND and NOR as universal gates	6th	Verification of truth table for positive edge triggered, negative edge triggered IC flip-flops
	17	Introduction to TTL and CMOS logic families		
	18	Test of Unit 1, 2, 3 & 4		
7th	19	Postulates of Boolean algebra, De Morgan's Theorems	7th	Verification of truth table for level triggered IC flip-flops
	20	Implementation of Boolean (logic) equation with gates		
	21	Karnaugh map		
8th	22	Karnaugh map	8th	Verification of truth table for encoder and decoder ICs, Mux and DeMux
	23	Half adder and Full adder circuit, design and implementation		
	24	4 bit adder circuit		

9th	25	Four bit decoder circuits for 7 segment display and decoder	9th	To design a 4 bit SISO, SIPO, PISO, PIPO shift registers using JK/D flip flops and
	26	Basic functions and block diagram of MUX		
	27	Basic functions and block diagram of DEMUX		
10th	28	Basic functions and block diagram of Encoder	10th	To design a 4 bit SISO, SIPO shift registers using JK/D flip flops and
	29	Types of latch with their working and applications		
	30	Operation using waveforms and truth tables of RS, T, D		
11th	31	Operation of Master/Slave JK flip flops	11th	To design a 4 bit PISO, PIPO shift registers using JK/D flip flops and
	32	Difference between a latch and a flip flop		
	33	Test of Unit 5, 6, 7 & 8		
12th	34	Asynchronous and Synchronous counters, Binary counters	12th	To design a 4 bit ring counter and verify its operation
	35	Divide by N ripple counters, Decade counter, Ring counter		
	36	Divide by N ripple counters, Decade counter, Ring counter		
13th	37	Introduction of shift left and shift right	13th	Use of Asynchronous Counter ICs (7490 or 7493)
	38	Serial in parallel out, serial in serial out Register		
	39	Parallel in serial out, parallel in parallel out Register		
14th	40	Universal shift register	14th	Revision of Practical's
	41	Working principle of A/D converters		
	42	Working principle of D/A converters		
15th	43	Memory organization, semiconductor memories	15th	Viva- Voice
	44	static and dynamic RAM, introduction to 74181 ALU IC		
	45	Test of Unit 9, 10, 11 & 12		

Lesson Plan

Name of the faculty : Mr. Manoj Kumar, Lecturer
Discipline : Electronics and Communication Engg.
Semester : 3rd
Subject : Digital Electronics
Lesson Plan Duration :15 weeks(from July,2018 to November,2018)
Work Load (Lecture)Per week (in hours): Lectures-03, Practical-03

Week	Lecture day	Theory	Practical	
			Practical Day	Topic
1st	1	Distinction between analog and digital signal	1	Verification and interpretation of truth tables for AND, OR, NOT NAND, NOR and Exclusive OR (EXOR) and Exclusive NOR(EXNOR) gates
	2	Applications and advantages of digital signals		
	3	Binary, octal		
2nd	4	Hexadecimal number system: conversion from decimal and hexadecimal to binary and vice-versa	2	Verification and interpretation of truth tables for AND, OR, NOT NAND, NOR and Exclusive OR (EXOR) and Exclusive NOR(EXNOR) gates
	5	Binary addition and subtraction including binary points. 1's and 2'scomplement method of addition/subtraction		
	6	Concept of code, weighted and non-weighted codes		
3rd	7	Examples of 8421, BCD, excess-3 and Gray code	3	Realisation of logic functions with the help of NAND or NOR gates
	8	Concept of parity, single and double parity and error detection		
	9	Concept of negative and positive logic		
4th	10	Definition, symbols and truth tables of NOT, AND, OR, NAND	4	To design a half adder using XOR and NAND gates and verification of its operation
	11	Definition, symbols and truth tables ofNOR, EXOR Gates		
	12	NAND and NOR as universal gates		
5th	13	Introduction to TTL	5	Construction of a full adder circuit using XOR and NAND gates and verify its operation
	14	CMOS logic families		
	15	Postulates of Boolean algebra, De Morgan's Theorems		
6th	16	Implementation of Boolean (logic) equation with gates	6	Verification of truth table for positive edge triggered, negative edge triggered, level triggered IC flip-flops (At least one IC each of D latch , D flip-flop, JK flip-flops)
	17	Karnaugh map		
	18	Simple application in developing combinational logic circuits		
7th	19	Half adder and Full adder circuit, design and implementation	7	Verification of truth table for positive edge triggered, negative edge triggered, level triggered IC flip-flops (At least one IC each of D latch , D flip-flop, JK flip-flops)
	20	4 bit adder circuit		
	21	Four bit decoder circuits for 7 segment display and decoder/driver ICs		
8th	22	Basic functions and block diagram of MUX	8	Verification of truth table for encoder and decoder ICs, Mux and DeMux
	23	DEMUX with different ICs		
	24	Basic functions and block diagram of Encoder		
	25	Concept and types of latch with their working and applications		

9th	26	Operation using waveforms and truth tables of RS	9	Practice
	27	T, D, Master/Slave JK flip flops		
10th	28	Difference between a latch and a flip flop	10	To design a 4 bit SISO, SIPO, PISO, PIPO shift registers using JK/D flip flops and verification of their operation
	29	Introduction to Asynchronous		
	30	Synchronous counters		
11th	31	Binary counters	11	To design a 4 bit SISO, SIPO, PISO, PIPO shift registers using JK/D flip flops and verification of their operation
	32	Divide by N ripple counters, Decade counter, Ring counter		
	33	Introduction and basic concepts including shift left and shift right		
12th	34	Serial in parallel out, serial in serial out	12	To design a 4 bit ring counter and verify its operation
	35	Parallel in serial out		
	36	Parallel in parallel out		
13th	37	Universal shift register	13	Practice
	38	Working principle of A/D and D/A converters		
	39	Brief idea about different techniques of A/D conversion and study of - • Stair step Ramp A/D converter • Dual Slope A/D converter		
14th	40	Successive Approximation A/D Converter	14	8. Use of Asynchronous Counter ICs (7490 or 7493)
	41	Binary Weighted D/A converter • R/2R ladder D/A converter		
	42	Applications of A/D and D/A converter		
15th	43	Memory organization	15	Practice
	44	classification of semiconductor memories		
	45	Static and dynamic RAM, introduction to 74181 ALU IC		

LESSON PLAN

NAME OF FACULTY Sh. Patanjali Kaushik
DISCIPLINE Electronics and communication Engg. **SEMESTER** 3rd
SUBJECT Electronics Device & Circuits
LESSON PLAN DURATION: 15 weeks
WORK LOAD LECTURES - 03, PRACTICALS - 03

WEEK	THEORY		PRACTICAL	
	LECTURE DAY	TOPIC	PRACTICAL DAY	TOPIC
1st	1	Need for multistage amplifier	1st	Study of a two stage RC coupled amplifier
	2	Gain of multistage amplifier		
	3	RC coupled, transformer coupled multistage amplifier		
2nd	4	direct coupled multistage amplifier, frequency response & bandwidth	2nd	Study of a push-pull amplifier
	5	Test of Unit 1		
	6	Voltage & Power amplifier, collector efficiency, distortion & dissipation capability		
3rd	7	Classification of power amplifier class A, B and C	3rd	Study of an emitter follower circuit
	8	Class A single-ended power amplifier, its working & collector efficiency		
	9	Impedance matching in a power amplifier using transformer		
4th	10	Push-pull amplifier: circuit details, working and advantages	4th	Study Hartley oscillator & Colpitt's Oscillator
	11	Principles of the working of complementary symmetry push-pull amplifier		
	12	Heat sinks in power amplifiers, doubts of studnts in this Unit		
5th	13	Test of Unit 2	5th	Study Phase Shift & Wein Bridge oscillator
	14	Feedback & its importance, positive & negative feedback & their need		
	15	Voltage gain of an amplifier with negative feedback		
6th	16	Effect of -ve feedback on voltage gain, stability, distortion, bandwidth	6th	Study of IC 555 an astable multivibrator
	17	Effect of -ve feedback on output and input impedance of an amplifier		
	18	Typical feedback circuits Effect of removing the emitter by-pass capacitor on a CE transistor		
7th	19	Emitter follower and its applications	7th	Study of IC 555 an bistable multivibrator
	20	Test of Unit 3		
	21	Sinusoidal Oscillators – positive feedback in amplifiers		
8th	22	Difference between an oscillator & an alternator, Essentials of an oscillator	8th	Study op-Amp (IC 741) as an Adder & Subtractor
	23	Circuit details & working of LC oscillators viz. Tuned Collector oscillators		
	24	Circuit details and working of Hartley and Colpitt’s oscillators		

9th	25	R-C oscillator circuits, phase shift and Wein bridge oscillator circuits	9th	Study op-Amp (IC 741) as an Integrator & Invertor
	26	Introduction to piezoelectric crystal and crystal oscillator circuit		
	27	Test of Unit 4		
10th	28	Series and parallel resonance	10th	Positive fixed voltage DC power supply using three terminal voltage regulator IC
	29	Single and double tuned voltage amplifiers		
	30	Frequency response of tuned voltage amplifiers		
11th	31	Applications of tuned voltage amplifiers	11th	Negative fixed voltage DC power supply using three terminal voltage regulator IC
	32	Test of Unit 5		
	33	Transistor as a switch		
12th	34	Astable, monostable multivibrator circuits	12th	Revision of Experiments
	35	Bistable multivibrator circuit, uses of multivibrators		
	36	Block diagram and operation of 555 IC timer		
13th	37	IC555 as monostable & astable multi-vibrator & bistable multivibrator	13th	Revision of Experiments
	38	Test of Unit 6		
	39	Op-Amp, & its block diagram, IC-741 and its pin configuration		
14th	40	Differential voltage gain, CMRR, PSRR, slew rate & input offset current	14th	Revision of Experiments
	41	Op-Amp as an inverter, scale changer, adder, subtractor, differentiator, and integrator		
	42	DC power supply. Line and load regulation		
15th	43	Concept of fixed voltage, IC regulators	15th	Revision of Experiments
	44	Concept of variable voltage regulator		
	45	Test of Unit 7 & 8		

Lesson Plan

Name of the faculty : Mr. Manoj Kumar, Lecturer
Discipline : Electronics and Communication Engg.
Semester : 3rd
Subject : EIM
Lesson Plan Duration :15 weeks(from July,2018 to November,2018)
Work Load (Lecture)Per week (in hours): Lectures-03

Week	Lecture day	Theory	Practical	
			Practical Day	Topic
1st	1	Measurement, method of measurement, types of instruments	1	Measurement of voltage, resistance, frequency using digital multimeter
	2	Specifications of instruments: Accuracy, precision, sensitivity, resolution, range, errors in measurement		
	3	Sources of errors, limiting errors, loading effect, importance and applications of standards and calibration		
2nd	4	Principles of measurement of DC voltage	2	Measurement of voltage, frequency, time period and phase using CRO
	5	DC current, AC voltage, AC current measurement		
	6	Principles of operation and construction of permanent magnet moving coil (PMMC) instruments		
3rd	7	Moving iron type instruments	3	Measurement of voltage, frequency, time and phase using DSO
	8	Construction and working of Cathode Ray Tube(CRT)		
	9	Block diagram description of a basic CRO		
4th	10	Triggered sweep oscilloscope, front panel controls	4	Measurement of voltage, frequency, time and phase using DSO
	11	Specifications of CRO and their explanation		
	12	Measurement of current, voltage		
5th	13	Frequency, time period measurement	5	Measurement of Q of a coil
	14	Phase using CRO		
	15	Digital storage oscilloscope (DSO)		
6th	16	Block diagram and working principle of DSO	6	Measurement of resistance and inductance of coil using RLC Bridge
	17	Wheat stone bridge		
	18	Maxwell's induction bridge		
	19	Hay's bridge		

7th	20	De-Sauty's bridge, Schering bridge and Anderson bridge	7	Measurement of resistance and inductance of coil using RLC Bridge
	21	Bock diagram description of laboratory type RLC bridge, specifications of RLC bridge		
8th	22	Block diagram and working principle of Q meter	8	Measurement of impedance using Maxwell Induction Bridge
	23	Explanation of block diagram of Signal Generators		
	24	Specifications of low frequency		
9th	25	RF generators	9	To find the value of unknown resistance using Wheat Stone Bridge
	26	Pulse generator, function generator		
	27	Distortion factor meter		
10th	28	Instrumentation amplifier	10	To find the value of unknown resistance using Wheat Stone Bridge
	29	Its characteristics, need and working		
	30	Comparison of analog and digital instruments		
11th	31	Working principle of ramp, dual slope Volt meter	11	Measurement of distortion using Distortion Factor Meter
	32	Integration type digital voltmeter		
	33	Block diagram and working of a digital multi-meter		
12th	34	Specifications of digital multi-meter and their applications	12	Measurement of distortion using Distortion Factor Meter
	35	Limitations of digital multi-meters		
	36	Working principle of logic probe		
13th	37	Logic pulsar	13	Use of logic pulser and logic pobe
	38	Logic analyzer		
	39	Signature analyzer		
14th	40	Revision	14	Practice
	41	Revision		
	42	Revision		
15th	43	Revision	15	Viva- Vioce
	44	Revision		
	45	Revision		

LESSON PLAN

Name of Faculty: RAMESH KUMARI
Discipline: ECE
Semester: 3 SEM
Subject: ELECTRICAL MACHINES
Lesson Plan Duration: 16 weeks
Work load (Lecture /Practical) per week (in hours): Lectures—03, Practical—03

Week		Theory	Practical	
	Lecture Day	Topic (Including Assignment/ Test	Practical Day	Topic
1st	1	Three Phase Supply - Advantage of three-phase system over single-phase system. -	1	To measure power and power factors in 3 Phase load by two wattmeter method
	2	- Star Delta connections -		
	3	- Relation between phase and line voltage and current in a three phase system -		
2nd	4	- Power and power factor in three-phase system and their measurements by one, two and three wattmeter methods.	2	File Checking/Review/Revision of jobs
	5	Transformers Principle of operation and constructional details of single phase transformer		
	6	- Voltage Regulation of a transformer (No Derivation)		
3rd	7	- Losses in a transformer	3	Internal Practical & Viva Vice
	8	- Efficiency, condition for maximum efficiency and all day efficiency		
	9	- CTs and PTs (Current transformer and potential transformer) CVT (Constant Voltage Transformer)		
4th	10	Introduction to Rotating Electrical Machines	4	To determine the efficiency of a single phase transformer from the data obtained through open circuit and short circuit test
	11	- E.M.F induced in a coil rotating in a magnetic field.		
	12	- Definition of motor and generator		

5th	13	- Basic principle of a generator and a motor	5	File Checking/Review/Revision of jobs
	14	- Torque due to alignment of two magnetic fields and the concept of Torque angle		
	15	Basic Electromagnetic laws (Faraday's laws of Electromagnetic Induction)		
6th	16	DC Machines - Principle of working of d.c motors and d.c generator, their constructional details -	6	Internal Practical & Viva Vice
	17	REVISION		
	18	ASSIGNMENT		
7th	19	- Function of the commutator for motoring and generating action	7	To measure power and power factor of a single phase induction motor
	20	- Factors determining the speed of a DC motor - Different types of excitation		
	21	- Characteristics of different types of DC machines -		
8th	22	- Starting of DC motors and starters	8	To run a synchronous motor with a.c supply and to measure speed to verify the relation N=12O f/ P
	23	Application of DC machines		
	24	REVISION		
9th	25	ASSIGNMENT	9	File Checking/Review/Revision of jobs
	26	CLASS TEST-1		
	27	REVISION-2		
10th	28	CLASS TEST-2	10	Internal Practical & Viva Vice
	29	A.C. Motors		
	30	Revolving magnetic field produced by poly phase supply		
11th	31	Brief introduction about three phase induction motors, its principle of operation	11	To make connections of starting and running winding of a single phase capacitor motor and to run it with the help a DOL starter and to measure its speed
	32	Principle and working of Synchronous Machines Application of Synchronous Machines		
	33	REVISION		

12th	34	ASSIGNMENT	12	File Checking/Review/Revision of jobs
	35	CLASS TEST-1		
	36	REVISION-2		
13th	37	CLASS TEST-2	13	Internal Practical & Viva Vice
	38	Single Phase Fractional Kilowatt Motors Introduction		
	39	- Principle of operation of single phase motors		
14th	40	- Types of single phase induction motors and their constructional details	14	Study construction of a stepper and servomotor and to write their complete specifications.
	41	- Single phase synchronous motors – reluctance motor (hysteresis motor)		
	42	- Introduction to Commutator type single-phase motors		
15th	43	- Introduction to servo- motors and stepper motors	15	
	44	**Concept of micro-motors**		
	45	REVISION		
16th	46	ASSIGNMENT	16	
	47	CLASS TEST-1		
	48	REVISION-2		
		CLASS TEST-2		

LESSON PLAN

Name of Faculty : LINCOLN HADDA

Discipline : ELECTRONICS & COMMUNICATION ENGG

Semester : 3rd

Subject : PRINCIPLES OF COMMUNICATIONS ENGINEERINGS

Work Load : LECTURES-03, PRACTICAL-06

Lesson Plan Duration :15 weeks

Week	Lecture Day	THEORY	Week	Practicals day	PRACTICALS
		Topic			Topic
1	1	BASIC SCHEME OF A MODERN COMMUNICATION SYSTEM	1	G-1	TESTING OF ELECTRONIC COMPONENTS USING MULTIMETER AND CRO
	2	NEED FOR MODULATION IN COMMUNICATION SYSTEMS		G-2	TESTING OF ELECTRONIC COMPONENTS USING MULTIMETER AND CRO
	3	NEED FOR DEMODULATION AND FREQUENCY TRANSLATION IN COMMUNICATION SYSTEMS			
2	4	DERIVATION OF EXPRESSION FOR AN AMPLITUDE MODULATED WAVE. CARRIER AND SIDE BAND COMPONENTS	2	G-1	FAMILIARIZATION OF FRONT PANEL WORKING OF CRO AND DSO
	5	MODULATION INDEX. SPECTRUM AND BW OF AM WAVE		G-2	FAMILIARIZATION OF FRONT PANEL WORKING OF CRO AND DSO
	6	RELATIVE POWER DISTRIBUTION IN CARRIER AND SIDE BANDS			
3	7	ELEMENTARY IDEA OF DSB-SC, SSB-SC	3	G-1	To observe an AM wave on CRO produced by a standard signal generator using internal and external modulation
	8	ISB AND VSB MODULATIONS		G-2	To observe an AM wave on CRO produced by a standard signal generator using internal and external modulation
	9	COMPARISON AND AREAS OF APPLICATIONS OF VARIOUS MODULATIONS SCHEMES			
4	10	Expression for frequency modulated wave and its frequency spectrum	4	G-1	To measure the modulation index of the wave obtained on CRO produced by a standard signal generator using internal and external modulation
	11	MODULATION INDEX, MAXIMUM FREQUENCY DEVIATION		G-2	To measure the modulation index of the wave obtained on CRO produced by a standard signal generator using internal and external modulation
	12	CONCEPT OF DEVIATION RATIO			
5	13	BW OF FM SIGNALS, CARSON'S RULE	5	G-1	To obtain an AM wave from a square law modulator circuit and observe waveforms

	14	REVISION FOR SESSIONAL TEST		G-2	To obtain an AM wave from a square law modulator circuit and observe waveforms
	15	DERIVATION OF EXPRESSION FOR PHASE MODULATED WAVE			
6	16	CONCEPT OF MODULATION INDEX	6	G-1	To measure the modulation index of the wave form obtained from square law modulator circuit
	17	COMPARISON WITH FREQUENCY MODULATION		G-2	To measure the modulation index of the wave form obtained from square law modulator circuit
	18	PRINCIPLES OF AM MODULATORS			
7	19	CIRCUIT DIAGRAM AND WORKING OPERATION OF COLLECTOR MODULATOR	7	G-1	To obtain an FM wave and measure the frequency deviation for different modulating signals.
	20	CIRCUIT DIAGRAM AND WORKING OPERATION OF BASE MODULATOR		G-2	To obtain an FM wave and measure the frequency deviation for different modulating signals.
	21	CIRCUIT DIAGRAM AND WORKING OPERATION OF SQUARE LOW MODULATOR			
8	22	CIRCUIT DIAGRAM AND WORKING OPERATION OF BALANCED MODULATOR	8	G-1	To obtain modulating signal from an AM detector circuit and observe the pattern for different RC time constants and obtain its optimum value for least distortion.
	23	REVISION		G-2	To obtain modulating signal from an AM detector circuit and observe the pattern for different RC time constants and obtain its optimum value for least distortion.
	24	WORKING PRINCIPLES AND APPLICATIONS OF REACTANCE MODULATOR			
9	25	WORKING PRINCIPLES AND APPLICATIONS OF VARACTOR DIODE MODULATOR	9	G-1	To obtain modulating signal from FM detector.
	26	WORKING PRINCIPLES AND APPLICATIONS OF VCO AND ARMSTRONG PHASE MODULATOR		G-2	To obtain modulating signal from FM detector.
	27	STABILIZATION OF CARRIER USING AFC			
10	28	PRINCIPLES OF DEMODULATION OF AM WAVE USING DIODE DETECTOR CIRCUIT	10	G-1	To observe the sampled signal and compare it with the analog input signal. Note the effect of varying the sampling pulse width and frequency on the sampled output.

	29	CONCEPT OF CLIPPING		G-2	To observe the sampled signal and compare it with the analog input signal. Note the effect of varying the sampling pulse width and frequency on the sampled output.
	30	FORMULA FOR RC TIME CONSTANT FOR MINIMUM DISTORTION			
11	31	BASIC PRINCIPLES OF FM DETECTION USING SLOPE DETECTOR	11	G-1	To observe and note the pulse amplitude modulated signal (PAM) and compare them with the corresponding analog input signal
	32	PRINCIPLE OF WORKING OF FOSTER-SEELEY DISCRIMINATOR		G-2	To observe and note the pulse amplitude modulated signal (PAM) and compare them with the corresponding analog input signal
	33	PRINCIPLE OF WORKING OF RATIO DETECTOR			
12	34	PRINCIPLE OF WORKING OF BLOCK DIAGRAM OF PHASE LOCKED LOOP (PLL) FM DEMODULATORS (NO DERIVATION)	12	G-1	To observe PPM and PWM signal and compare it with the analog input signal
	35	CONCEPT OF SAMPLING THEOREM		G-2	To observe PPM and PWM signal and compare it with the analog input signal
	36	ELEMENTARY IDEA OF SAMPLING FREQUENCY FOR PULSE MODULATION			
13	37	BASIC CONCEPTS OF TIME DIVISION MULTIPLEXING (TDM)	13	G-1	Repeation of selected practicals
	38	BASIC CONCEPTS OF FREQUENCY DIVISION MULTIPLEXING (FDM)		G-2	Repeation of selected practicals
	39	BASIC CONCEPTS OF PULSE AMPLITUDE MODULATION (PAM)			
14	40	BASIC CONCEPTS OF PULSE POSITION MODULATION (PPM)	14	G-1	Repeation of selected practicals
	41	BASIC CONCEPTS OF PULSE WIDTH MODULATION (PWM)		G-2	Repeation of selected practicals
	42	REVISION FOR SESSIONAL			
15	43	REVISION FOR FINAL EXAM	15	G-1	Preparation for Viva Voce for final practical exam
	44	REVISION FOR FINAL EXAM		G-2	Preparation for Viva Voce for final practical exam
	45	REVISION FOR FINAL EXAM			

LESSON PLAN

Name of Faculty : LINCOLN HADDA

Discipline : ELECTRONICS & COMMUNICATION ENGG

Semester : 3rd

Subject : PRINCIPLES OF COMMUNICATIONS ENGINEERINGS

Work Load : LECTURES-03, PRACTICAL-06

Lesson Plan Duration :15 weeks

Week	Lecture Day	THEORY	Week	Practicals day	PRACTICALS
		Topic			Topic
1	1	BASIC SCHEME OF A MODERN COMMUNICATION SYSTEM	1	G-1	TESTING OF ELECTRONIC COMPONENTS USING MULTIMETER AND CRO
	2	NEED FOR MODULATION IN COMMUNICATION SYSTEMS		G-2	TESTING OF ELECTRONIC COMPONENTS USING MULTIMETER AND CRO
	3	NEED FOR DEMODULATION AND FREQUENCY TRANSLATION IN COMMUNICATION SYSTEMS			
2	4	DERIVATION OF EXPRESSION FOR AN AMPLITUDE MODULATED WAVE. CARRIER AND SIDE BAND COMPONENTS	2	G-1	FAMILIARIZATION OF FRONT PANEL WORKING OF CRO AND DSO
	5	MODULATION INDEX. SPECTRUM AND BW OF AM WAVE		G-2	FAMILIARIZATION OF FRONT PANEL WORKING OF CRO AND DSO
	6	RELATIVE POWER DISTRIBUTION IN CARRIER AND SIDE BANDS			
3	7	ELEMENTARY IDEA OF DSB-SC, SSB-SC	3	G-1	To observe an AM wave on CRO produced by a standard signal generator using internal and external modulation
	8	ISB AND VSB MODULATIONS		G-2	To observe an AM wave on CRO produced by a standard signal generator using internal and external modulation
	9	COMPARISON AND AREAS OF APPLICATIONS OF VARIOUS MODULATIONS SCHEMES			
4	10	Expression for frequency modulated wave and its frequency spectrum	4	G-1	To measure the modulation index of the wave obtained on CRO produced by a standard signal generator using internal and external modulation
	11	MODULATION INDEX, MAXIMUM FREQUENCY DEVIATION		G-2	To measure the modulation index of the wave obtained on CRO produced by a standard signal generator using internal and external modulation
	12	CONCEPT OF DEVIATION RATIO			
5	13	BW OF FM SIGNALS, CARSON'S RULE	5	G-1	To obtain an AM wave from a square law modulator circuit and observe waveforms

	14	REVISION FOR SESSIONAL TEST		G-2	To obtain an AM wave from a square law modulator circuit and observe waveforms
	15	DERIVATION OF EXPRESSION FOR PHASE MODULATED WAVE			
6	16	CONCEPT OF MODULATION INDEX	6	G-1	To measure the modulation index of the wave form obtained from square law modulator circuit
	17	COMPARISON WITH FREQUENCY MODULATION		G-2	To measure the modulation index of the wave form obtained from square law modulator circuit
	18	PRINCIPLES OF AM MODULATORS			
7	19	CIRCUIT DIAGRAM AND WORKING OPERATION OF COLLECTOR MODULATOR	7	G-1	To obtain an FM wave and measure the frequency deviation for different modulating signals.
	20	CIRCUIT DIAGRAM AND WORKING OPERATION OF BASE MODULATOR		G-2	To obtain an FM wave and measure the frequency deviation for different modulating signals.
	21	CIRCUIT DIAGRAM AND WORKING OPERATION OF SQUARE LOW MODULATOR			
8	22	CIRCUIT DIAGRAM AND WORKING OPERATION OF BALANCED MODULATOR	8	G-1	To obtain modulating signal from an AM detector circuit and observe the pattern for different RC time constants and obtain its optimum value for least distortion.
	23	REVISION		G-2	To obtain modulating signal from an AM detector circuit and observe the pattern for different RC time constants and obtain its optimum value for least distortion.
	24	WORKING PRINCIPLES AND APPLICATIONS OF REACTANCE MODULATOR			
9	25	WORKING PRINCIPLES AND APPLICATIONS OF VARACTOR DIODE MODULATOR	9	G-1	To obtain modulating signal from FM detector.
	26	WORKING PRINCIPLES AND APPLICATIONS OF VCO AND ARMSTRONG PHASE MODULATOR		G-2	To obtain modulating signal from FM detector.
	27	STABILIZATION OF CARRIER USING AFC			
10	28	PRINCIPLES OF DEMODULATION OF AM WAVE USING DIODE DETECTOR CIRCUIT	10	G-1	To observe the sampled signal and compare it with the analog input signal. Note the effect of varying the sampling pulse width and frequency on the sampled output.

	29	CONCEPT OF CLIPPING		G-2	To observe the sampled signal and compare it with the analog input signal. Note the effect of varying the sampling pulse width and frequency on the sampled output.
	30	FORMULA FOR RC TIME CONSTANT FOR MINIMUM DISTORTION			
11	31	BASIC PRINCIPLES OF FM DETECTION USING SLOPE DETECTOR	11	G-1	To observe and note the pulse amplitude modulated signal (PAM) and compare them with the corresponding analog input signal
	32	PRINCIPLE OF WORKING OF FOSTER-SEELEY DISCRIMINATOR		G-2	To observe and note the pulse amplitude modulated signal (PAM) and compare them with the corresponding analog input signal
	33	PRINCIPLE OF WORKING OF RATIO DETECTOR			
12	34	PRINCIPLE OF WORKING OF BLOCK DIAGRAM OF PHASE LOCKED LOOP (PLL) FM DEMODULATORS (NO DERIVATION)	12	G-1	To observe PPM and PWM signal and compare it with the analog input signal
	35	CONCEPT OF SAMPLING THEOREM		G-2	To observe PPM and PWM signal and compare it with the analog input signal
	36	ELEMENTARY IDEA OF SAMPLING FREQUENCY FOR PULSE MODULATION			
13	37	BASIC CONCEPTS OF TIME DIVISION MULTIPLEXING (TDM)	13	G-1	Repeation of selected practicals
	38	BASIC CONCEPTS OF FREQUENCY DIVISION MULTIPLEXING (FDM)		G-2	Repeation of selected practicals
	39	BASIC CONCEPTS OF PULSE AMPLITUDE MODULATION (PAM)			
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	41	BASIC CONCEPTS OF PULSE WIDTH MODULATION (PWM)		G-2	Repeation of selected practicals
	42	REVISION FOR SESSIONAL			
15	43	REVISION FOR FINAL EXAM	15	G-1	Preparation for Viva Voce for final practical exam
	44	REVISION FOR FINAL EXAM		G-2	Preparation for Viva Voce for final practical exam
	45	REVISION FOR FINAL EXAM			

LESSON PLAN

Name of Faculty : Smt. Ramesh Kumari

Discipline : ELECTRONICS & COMMUNICATION ENGG.

Semester : 3rd

Subject : SOFT SKILL / SCA

Work Load : 02 Practical

Lesson Plan Duration :15 weeks(from July,2018 to November,2018)

Week	Practical Day	Practicals
		Topic
1	1	INTRODUCTION ABOUT SOFT SKILLS
	2	WHAT IS ART OF LISTENING
	3	INTRODUCTION ABOUT LISTENING TWO EAR AND MOUTH
	4	TYPES OF LISTENING
	5	BENEFOR OF LISTEING
2	6	FACTORS ABOUT RELATED TO LISTENING
	7	FACTORS THAT HAMPER LISTENING
	8	COMMON POOR LISTENING HABITS
	9	ADVANTAGE OF LISTENING
	10	LISTENING TIPS
3	11	INTRODUCTION ABOUT READING
	12	COGNITIVE PROCESS OF READING
	13	DISCUSSION ABOUT GOOD READERS
	14	BENEFITS OF READING
	15	DIFFERENT TYPES OF READING
4	16	TIPS FOR EFFECTIVE READING
	17	DIFFERENT STAGE OF READING
	18	DETERMINE STUDENT READING RATE
	19	ADJUSTING READING RATE
	20	ACTIVITIES FOR INCREASING READING RATE
5	21	PROBLEM WITH READING
	22	BECOMING AN EFFICIENT READER
	23	INTROCUTION ABOUT SPEAKING
	24	WHAT MAKES COMMUNATION IMPORTANT
	25	DEFINE COMMUNICATION
6	26	FEATURES OF COMMUNICATION
	27	COMMUNICATION PROCESS
	28	CHANNELS OF COMMUNCATION
	29	FORMAL AND INFORMAL COMMUNICATION N/W
	30	IMPORTANCE OF COMMUNICATION
7	31	BURRES OF COMMUNICAITON
	32	TIPS OF EFFECTIVE COMMUNICATION
	33	CONVERSATION TIPS
	34	WHAT IS PRESENTATION
	35	TIPS FOR POWERFUL PRESENTATION
8	36	ART OF PUBLIC SPEAKING
	37	IMPORTANCE OF PUBLIC SPEAKING
	38	BENEFIT OF PUBLIC SPEAKING
	39	PUBLIC SPEAKING TIPS
	40	OVER COMING FEARS FOR PUBLIC SPEAKING
9	41	INTRODUCTION ABOUT WRITING
	42	IMPORTANCE ABOUT WRITING
	43	FEATURES OF WRITING

	44	BENEFITS OF WRITING
	45	CREATIVE WRITING TIPS
10	46	DRAWBACK OF WRITTEN COMMUNICATION
	47	INTRODUCTION ABOUT EMAIL
	48	INTRODUCTION ABOUT MAIL MAGIC
	49	USE OF APPROPRIATE SALUTATION
	50	MAKE THE SUBJECT MATTER SIGNIFICENT
11	51	KEEP A DICTIONERY CLOSE BY
	52	USE COMMAS WHEN IN DOUBT
	53	USE SMILEY WHEN IN DOUBT
	54	PREFACE INCLUDING PREVIOUS MESSGAGE
	55	SHORTEN THE FILE ATTACHMENT
12	56	RESEND BEFORE PRESSING THE SEND BUTTON
	57	BE POLITE AND REPLICATE GOOD DEEDS
	58	ANTICIPATE EMPATHIZE
	59	UNDERSTANT WHAT NETTQUELTE
	60	INTROCUTION ABOUT
13	61	DISCUSSION ABOUT TOPICS REALTED TO Gender
	62	DISCUSSION ABOUT PROVISION OF PUNISHMENT
	63	PUT PUNISHMENT AGAINT VIOLATION
	64	ILLEGAL FLESH TRADE
	65	REOBLIZATION OF VICTIM
14	66	RAPE WILL ACT MAKE TO HELP VICTIM
	67	DISCUSSION ABOUT GENERAL TOPICS
	68	TEST
	69	ASSIGNMENT
	70	REVISION
15	71	REVISION / DISCUSSION
	72	COPY CHECKING
	73	REVISION / DISCUSSION
	74	COPY CHECKING
	75	DISCUSSION