lesson Plan

Name of the Faculty : Ms. Suman Bala
Discipline : Electronics and Communication Engg.
Semester : IVth
Subject : NETWORK FILTERS AND TRANSMISSION LINES
Lesson Plan Duration : Jan-Apr-2018
Work Load (Lecture/Practical) per week (In hours): Lect. - 03 , Practical - 03

Week	Theory		Practical	
	Lecture day	Topic (including assignment/ test)	Practical Day	Topic
1st	1	Introduction to network system	1st	Introduction about Practical
	2	Networks : Two port or four terminals network, stubs		
	3	Basic concepts of Symmetrical and asymmetrical networks ,Balanced and		
2nd	4	Basic concepts of T-network,π- Network, Ladder network,Lattice network,L-	2nd	To measure the characteristic impedance of symmetrical T and π- Network
	5	Concept and significance of the terms characteristic impedance, propagation		
	6	Characteristic impedance of a π- Network		
3rd	7	Characteristic impedance of a π- Network	3rd	To measure the image impedance of a given asymmetrical T and π - Network
	8	Propagation constant of a T- Network		
	9	Propagation constant of a π- Network		
4th	10	Attenuation and phase constant of a T and π- Network	4th	To determine the characteristic impedance experimentally of a prototype low pass filter and plot
	11	Insertion loss of T-network and π Network		
	12	Revision of unit-1		
5th	13	Asymmetrical Network Concept and significance of iterative impedance	5th	To design and measure the attenuation of a symmetrical T/ π type attenuator
	14	Image impedance, image transfer constant and insertion loss		
	15	The half section (L-section); symmetrical T and Л sections into half sections		
6th	16	Test	6th	To determine the characteristic impedance experimentally of a prototype high pass filter and
	17	Attenuators, Units of attenuation ,General		
	18	Analysis and design of Symmetrical T attenuator		
7th	19	Analysis and design of Symmetrical π attenuator	7th	To determine the impedance characteristic and attenuation characteristic of a prototype band
	20	Analysis and design of L- type attenuator		
	21	Numerical problem on design of attenuators		
8th	22	Filters	8th	To determine the impedance characteristic and attenuation characteristic of a m-derived
	23	Brief idea of the use of filter networks in different communication systems		
	24	Test of 2nd unit		
9th	25	low pass,high pass, band pass and band stop filters.	9th	To determine the impedance characteristic and attenuation characteristic of a m-derived
	26	Prototype Filter Section: Impedance characteristics vs frequency		
	27	Attenuation Vs frequency; Phase shift Vs frequency, characteristics		
10th	28	Simple design problems of prototype low pass filter.	10th	To observe the information of standing waves on a transmission line and measurement of SWR
	29	M-Derived Filter Sections Limitation of prototype filters, need of m-derived		
	30	Crystal Filters Crystal and its equivalent circuits, special properties of		
11th	31	Active Filters Basic concept of active filters and their comparison with passive	11th	Draw the attenuation characteristics of a crystal filte
	32	Test		
	33	Transmission Lines Transmission Lines, their types and applications.		
12th	34	Distributed constants, T and πrepresentation of transmission line section.	12th	Repeat of any experiment
	35	Secondary constant of a transmission line. Transmission line equation		
	36	transmission line equation ,infinite line concept		
13th	37	Rivision and Test of transmission line	13th	Viva
	38	Condition for minimum distortion and minimum attenuation of signal on-the-		
	39	Concept of reflection and standing waves, definition of reflection coefficient,		
14th	40	Concept of transmission line at high frequency	14th	Repeat of any other experiment
	41	Impedence matching, quarter wave transformer		
	42	Indroduction to stubs- single, open,short stubs		
15th	43	Rivision of 4th unit	15th	Viva
	44	Test		
	45	Revision		

Lesson Plan

Name of the Faculty : Yet to Be Assigned
Discipline : Electronics and Communication Engg.
Semester : Ivth
Subject : MICROPROCESSORS AND PERIPHERAL DEVICE
Lesson Plan Duration : **from jan 2018-April 2018**
Work Load (Lecture/ Practical) per week (in hours): Lecture=04, Practical-02

Week	Theory		Practical	
	Lecture day	Topic (including assignment/ test)	Practical Day	Topic
1st	1st	Introduction to microprocessor		Introduction about Practical
	2nd	Evolution of Microprocessor		
	3rd	Organization of a microcomputer and functions of its various blocks		
	4th	Microprocessor, its evolution, function and impact on modern society	1st	
2nd	5th	Architecture of a Microprocessor (8085)		Familiarization of different keys of 8085 microprocessor kit and its memory map
	6th	Concept of Bus, bus organization of 8085,		
	7th	Functional block diagram of 8085		
	8th	Revision & Test	2nd	
3rd	9th	8085 pin diagram		Familiarization of different keys of 8085 microprocessor kit and its memory map
	10th	Function of various pins		
	11th	Demultiplexing of address/data bus		
	12th	Generation of read/write control cycle	3rd	
4th	13th	Steps to execute a stored programme		Steps to enter, modify data/program and to execute a programme on 8085 kit
	14th	Instruction cycle		
	15th	Fetch cycle		
	16th	machine cycle	4th	
5th	17th	T-states		Writing and execution of ALP for addition and sub station of two 8 bit numbers
	18th	Fetch cycle, execute cycle		
	19th	Data transfer instruction		
	20th	Data transfer instruction	5th	
6th	21st	Arithmetic instruction part 1		Writing and execution of ALP for multiplication and division of two 8 bit numbers
	22nd	Arithmetic instruction part 2		
	23rd	Logical instruction part 1		
	24th	Logocal instruction part 2	6th	
7th	25th	Revision of data transfer instruction		Writing and execution of ALP for arranging 10 numbers in ascending/descending order
	26th	Branch instruction		
	27th	Revision of arithmetic instruction		
	28th	Stack instruction	7th	

8th	29th	I/O instruction		Writing and execution of ALP for 0 to 9 BCD counters (up/down counter according to choice stored in memory)
	30th	Machine control instruction programming in assembly language		
	31st	Concept of memory mapping		
	32nd	Partitioning of total memory space	8th	
9th	33rd	Address decoding		Interfacing exercise on 8255 like LED display control
	34th	Concept of memory mapping		
	35th	Partitioning of total memory space		
	36th	adder ess	9th	
10th	37th	Conept of pheripheral mapped I/O and memory mapped I/O		Interfacing exercise on 8253 programmable interval timer
	38th	Interfacing of memory mapped I/O devices		
	39th	Interrupts, Maskable and non-maskable		
	40th	Edge triggered and level triggered interrupt	10th	
11th	41st	Software interrupt, Restart interrupts and its use		Interfacing exercise on 8279 programmable KB/display interface like to display the hex code of key pressed on display
	42nd	Various hardware interrupts of 8085		
	43rd	Servicing interrupts		
	44th	RIM and SIM instruction	11th	
12th	45th	Priority interrupt controller		Use of 8085 emulator for hardware testing
	46th	Data Transfer Techniques : sync data transfer, async data transfer (hand shaking),		
	47th	Interrupt driven data transfer		
	48th	DMA	12th	
13th	49th	Serial data transfer		Viva
	50th	Block diagram of 8255 PPI		
	51st	Pin diagram of8255 PPI		
	52nd	Operating modes of 8253 PIT	13th	
14th	53rd	8257 / 8237 DMA controller		Viva
	54th	8251 Communication Interface Adapter(Block diagram)		
	55th	8251 Communication Interface Adapter(Pin diagram)		
	56th	Revision & Test	14th	
15th	57th	8279 programmable KB/Display Interface(Block diagram)		Viva
	58th	8279 programmable KB/Display Interface(pi n diagram, function of pins)		
	59th	Revision		
	60th	Test	15th	

LESSON PLAN

Name:- Yet To Be Assigned
Discipline:- E.C.E
Semester:- 4TH
Subject:- Digital Electronics- II

Lesson plan duration:- 15 Weeks (from jan 2018-April 2018)
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	**1st**	Types of integration Classification of logic family	1st	Binary resistor n/w DAC
	2 nd	Characteristics of logic family		
	3rd	Operation of RTL, TTL, ECL logic family		
2nd	**4th**	Operation of CMOS, NAND, NOR gates	2nd	Resistance ladder n/w DAC
	5th	Comparison of TTL and CMOS CMOS to TTL and TTL to CMOS interfacing		
	6th	Tristate device		
3rd	**7th**	Revision Assignment Unit-1	3rd	Viva-Voce
	8th	Test Unit-1		
	9th	Binary resistor n/w DAC Resistance ladder n/w DAC		
4th	**10th**	Performance characteristics of DAC	4th	ADC
	11th	Single slope ADC Dual slope ADC		
	12th	Successive Approximation ADC. Parallel ADC.		
5th	**13th**	Performance characteristics of DAC	5th	Full Adder Ckt.
	14th	Revision Assignment Unit-2		
	15th	Test Unit-2		
6th	**16th**	Memory organisation	6th	Viva-voce
	17th	Classification of Semiconductor memory		
	18th	Random Access memory. Read only memory.		
7th	**19th**	Expension of memory	7th	Full Subtractor Ckt.
	20th	CCD. CAM.		
	21st	Programmable logic arrey.		
8th	**22nd**	Programmable logic arrey.	8th	Design J-Kflip Flop counter.
	23rd	FPGA. Familiarization with comman ICs.		
	24th	Revision Assignmnt Unit-3		

9th	25th	Test	9th	Viva-Voce
	26th	K-Map using 5 & 6 Variables.		
	27th	Quine Mccluskey method.		
10th	28th	Problem sloving .	10th	Logical operation using IC 741
	29th	Test Unit-4		
	30th	Sequential cks.		
11th	31st	Synchronous sequential ckts. Asynchronous sequential ckts.	11th	Arithmatic operation using IC 74181
	32nd	Mealy and moore m/c		
	33rd	State Diagram. Excitiation table		
12th	34th	Designing of counters.	12th	Viva-Voce
	35th	Practice of designing of counters.		
	36th	Revision Assignment Unit-5		
13th	37th	Test	13th	Writing operation of RAM IC.
	38th	Arithmetic logic unit IC74181		
	39th	Implementation of Binary arithmetic Multiplication Division Subtraction Addition		
14th	40th	Revision Assignment Unit-6	14th	Reading operation of RAM IC
	41st	Test		
	42nd	Fuzzy and Classical sets Operation on sets		
15th	43rd	Fuzzy relation Membership function	15th	Viva-Voce
	44th	Fuzzification Defuzzification Fuzzy control system		
	45th	Test		

Lesson Plan

Name of the Faculty : Yet To Be Assigned
Discipline : Electronics and Communication Engg.
Semester : IVth
Subject : Instrumentation
Lesson Plan Duration : Jan-Apr-2018
Work Load (Lecture/ Practical) per week (in hours): 03 HOURS (Lecture)03 Hours per Group (PRACTICAL)

Week	Theory		Practical	
	Lecture day	Topic (including assignment/ test)	Practical Day	Topic
1st	1	Introduction about subject	1st	Introduction about Practical Instrumentation
	2	Measurements: Importance of measurement, basic measuring systems.		
	3	Advantages and limitations of each measuring system.		
2nd	4	Display devices	2nd	To measure the level of a liquid using a transducer
	5	Theory of Transducers: construction and use of various transducers		
	6	Resistive transducers and wire wound potentiometer.		
3rd	7	Capacitive transducers	3rd	To measure temperature using a thermo-couple
	8	Inductive transducers		
	9	Electromagnetic, piezo electric type transducer.		
4th	10	Measurement of Displacement and Strain: LVDT and RVDT transducer.	4th	Study and use of digital temperature controller
	11	Strain gauges and Gauge factor, gauge materials and their selections.		
	12	Use of electrical strain gauges their different types such as inductance type resistive type, wire and foil type etc.		
5th	13	Strain gauge bridges and amplifiers.	5th	Use of themistor in ON/OFF transducer
	14	Revision		
	15	Revision		
6th	16	Test & Assignment	6th	Study of variable capacitive transducer
	17	Force Measurement: Different types of force measuring devices and their principles		
	18	Load cells		
7th	19	load measurements by using elastic transducers and electrical strain gauges.	7th	Draw the characteristics of a potentiometer
	20	Torque Measurement: Different types of torque measurement methods.		
	21	Measurements of torque by brake and dynamometer.		
8th	22	Speed measurements; different methods, devices.	8th	To measure linear displacement using LVDT
	23	Pressure Measurement		
	24	Bourdon pressure gauges		

9th	25	Electrical pressure pickups and their principle construction and applications.	9th	To study the use of electrical strain gauge
	26	Low pressure measurements and Use of pressure cells.		
	27	Revision		
10th	28	Revision	10th	To study weighing machine using load cell
	29	Test & Assignment		
	30	Flow Measurement: Basic principles of magnetic flow meters.		
11th	31	Ultrasonic flow meters	11th	To study pH meter.
	32	Measurement of Temperature: Bimetallic thermometer.		
	33	Resistance thermometers		
12th	34	Thermisters	12th	Revision & Viva
	35	Thermocouple		
	36	Pyrometer		
13th	37	Temperature recorders	13th	Revision & Viva
	38	Measurement of other non electrical quantities such as humidity measurements.		
	39	pH value measurements		
14th	40	Level measurements	14th	Revision & Viva
	41	Vibrations measurements		
	42	Revision		
15th	43	Revision	15th	Revision & Viva
	44	Revision		
	45	Test		

Name of the Faculty : Mr. Kiran Kumar (Theory, Practical)
Discipline : (Elex & Comm. Engineering)
Semester : 4TH
Subject : Communication System
Lesson plan Duration : 15 Week (from January, 2018)
Workload per week in hours : Lectures-03, Practicals-03

Week	Theory		Practical	
	Lecture Day	Topic(including assignment test)	Practical Day	Topic
1st	1	Introduction about subject,AM/FM Transmitters ,Classification of transmitters on the basis of modulation, service, frequency and power.	1st	Introduction about Practical Communication Systems
	2	Block diagram of AM transmitters and working of each stage		
	3	Block diagram and working principles of reactance FET and Armstrong FM transmitters		
2ND	4	**Revision & Problem Discussion**	2ND	To observe the waveforms at different stages of a AM transmitter
	5	AM/FM Radio Receivers,Principle and working with block diagram of super Heterodyne AM receiver		
	6	Function of each block and typical waveforms at input and output of each block.		
3RD	7	Performance characteristics of a radio receiver: Sensitivity, selectivity, fidelity, S/N ratio,image rejection ratio and their measurement procedure.	3RD	To observe the waveforms at different stages of a Radio Receiver
	8	ISI standards on radio receivers.		
	9	Selection criteria for intermediate frequency (IF).		
4TH	10	Concepts of simple and delayed AGC.	4TH	To align AM broadcast radio receiver
	11	Block diagram of an FM receiver,		
	12	Function of each block and waveforms at input and output,of different		
5TH	13	Need for limiting and de-emphasis in FM reception	5TH	To identify and study the various types of antennas used in different frequency ranges
	14	Block diagram of communication receivers, differences with respect to broadcast receivers.		
	15	**Test of 1st and 2nd Unit**		
6TH	16	Antennas: Electromagnetic spectrum and its various ranges	6TH	To identify and study the various types of antennas used in different frequency ranges
	17	VLF, LF, MF, HF, VHF, UHF,Microwave		
	18	Physical concept of radiation of electromagnetic energy from a dipole. Concept of Polarization of EM Waves		
7TH	19	Definition and physical concepts of the terms used with antennas like point source, gain directivity	7TH	To plot the radiation pattern of a directional and Omni directional antenna
	20	Aperture, effective area, radiation pattern, beam width and radiation resistance,loss resistance		
	21	Types of antennas-brief description, characteristics and typical applications of half wave dipole, medium wave (mast) antenna		
8TH	22	Types of antennas-brief description, characteristics and typical applications		To plot the variation of field

		of half wave dipole		strength of a radiated wave, with distance from a transmitting antenna
	23	Medium wave (mast) antenna, folded dipole, patch, loop antenna, yagi and ferrite,rod antenna (used in transistor receivers).		
	24	Brief description of broad-side and end fire arrays, their radiation pattern and applications (without analysis).		
9TH	25	Brief idea about Rhombic antenna and dish antenna.	9TH	To plot the variation of field strength of a radiated wave, with distance from a transmitting
	26	Revision		
	27	Propagation:Basic idea about different modes of wave propagation.		
10TH	28	typical areas of application.Ground wave propagation.	10TH	Installation of Dish Antenna for best reception
	29	characteristics of Ground wave propagation.		
	30	summer field equation for field strength		
11TH	31	Space wave communication – line of sight propagation, standard atmosphere,	11TH	To observe waveforms at input and output of ASK and FSK modulator
	32	concept of effective earth radius range of space wave propagation standard atmosphere.		
	33	Duct propagation: sky wave propagation - ionosphere and its layers.		
12TH	34	Explanation of terms -virtual height, critical frequency, skips distance	12TH	To observe waveforms at input and output of ASK and FSK modulators
	35	maximum usable frequency, multiple hop Propagation.		
	36	**Revision & Problem Discussion**		
13TH	37	Digital Modulation Techniques	13TH	Revision & Viva
	38	Introduction of:PCM, DPCM		
	39	DELTA Modulation		
14TH	40	Basic block diagram and principle of working of the following ASK.	14TH	Revision & Viva
	41	Basic block diagram and principle of working of the following FSK		
	42	Basic block diagram and principle of working of the following PSK, QPSK.		
15TH	43	Spread Spectrum Techniques & Frequency Hopping Technique	15TH	Revision & Viva
	44	**Revision & Problem Discussion**		
	45	**Test**		