

Lesson Plan of 2nd Semester

Lesson Plan Duration : FEB 2024 -JUNE 2024 work Load (Lecture/ Practical) per week (in hours): 3 HOURS (Theory) + 08 HOURS (04 Hours*2 Groups) (PRACTICAL)							
Name of the Faculty: Pooja Malik Discipline : Electronics and Communication Engg. Subject :EDC-I Semester : II nd							
Week	Theory		Practical	Week	Theory		Practical
	Lecture day	Topic (including assignment/ test)			Lecture day	Topic (including assignment/ test)	
1	1	UNIT I: Basic atomic structure and energy levels, concept of insulators, conductors and semiconductors	Plotting of V-I characteristics of a PN junction diode	8	22	CB, CE, CC configurations of a transistor	Fabrication of Full-wave rectifier circuit on breadboard and observe the output
	2	Atomic structure of Germanium (Ge) and Silicon (Si), covalent bonds.			23	Current amplification factors, relation between α , β and γ .	
	3	Concept of intrinsic and extrinsic semiconductor, process of doping			24	Comparison of CB, CE and CC Configurations	
2	4	Energy level diagram of conductors, insulators and semiconductors; minority and majority charge carriers.	Plotting of V-I characteristics of a Zener diode	9	25	Transistor as an amplifier in CE Configuration	Plotting of the wave shape of full wave rectifier with a. Shunt capacitor filter b. Series inductor filter
	5	P and N type semiconductors and their conductivity			26	Concept of DC load line and calculation of current gain and voltage gain using DC load line	
	6	Effect of temperature on conductivity of intrinsic semiconductors			27	Assignment no. 2	
3	7	UNIT II: PN junction diode, mechanism of current flow in PN junction	To observe input and output of series clipping circuits.	10	28	Revision of chapter 2	Plotting of input and output characteristics and calculation of parameters of transistors in CE configuration.
	8	Forward and reverse biased PN junction, potential barrier, drift and diffusion currents, depletion layer,			29	Revision of chapter 3	
	9	Concept of Junction capacitance in forward and reverse biased condition.			30	2 nd Sessional exam	
4	10	V-I characteristics	To observe input and output of shunt clipping circuits	11	31	UNIT IV: Concept of transistor biasing and selection of operating point	Plotting of input and output characteristics and calculation of parameters of transistors in CB configuration.
	11	Static and dynamic resistance and their value calculation from the characteristics.			32	Need for stabilization of operating point	

	12	Assignment no. 1			33	Different types of biasing circuits	
5	13	Revision of chapter 1	To observe input and output of positive clamping circuit.	12	34	Single stage transistor amplifier circuit	Measurement of voltage gain, input, and output impedance in a single stage CE amplifier circuit.
	14	Revision of 1 st sessional exam			35	Concept of dc and ac load line and its use. Explanation of phase reversal of output voltage with respect to input Voltage.	
	15	1 st sessional exam			36	UNIT V: Construction, operation and characteristics of FETs and their applications	
6	16	Application of diode as half-wave, full wave and bridge rectifiers.	To observe input and output of negative clamping circuit	13	37	Construction, operation and characteristics of a MOSFET in depletion and enhancement modes and its applications	Plotting of V-I characteristics of FET.
	17	Peak Inverse Voltage, rectification efficiencies and ripple factor calculations			38	Comparison of JFET, MOSFET and BJT.	
	18	Shunt capacitor filter, series inductor filter, LC and π filters.			39	Assignment no. 3	
7	19	Types of diodes, characteristics, and applications of Zener diodes. Zener and avalanche breakdown	Fabrication of Half-wave rectifier circuit on breadboard and observe the output	14	40	Revision of chapter 4	VIVA-VOICE
	20	Introduction to Clipping and Clamping Circuits			41	Revision of chapter 5	
	21	UNIT III: Concept of a bipolar transistor, its structure, PNP and NPN transistors, their symbols and mechanism of current flow; Current relations in a transistor; concept of leakage current			42	3 rd sessional exam	

lesson Plan

Name of the Faculty : Sh. Ravinder Singh Punia

Discipline : Electronics and Communication Engg.

Semester : 2nd

Subject : ELECTRONICS INSTRUMENTS & MEASUREMENTS

Lesson Plan Duration: Feb. 2024 to June24

Work Load (Lecture/ Practical) per week (in hours): 03 HOURS (Lecture)

Week	Topic (including assignment/ test)
1st	Introduction about subject
	Syllabus of the subject
2nd	Unit-1 Basics of instruments & measurements- Measurement, method of measurement, types of instruments
	Specifications of instruments Accuracy, precision
	Specifications of instruments sensitivity, resolution, range, errors in measurement
3rd	sources of errors, limiting errors,
	loading effect, importance and applications of standards and calibration
	Class work/Assignment and revision.
4th	UNIT-2 Voltage ,Current and Resistance Measurement- Principles of measurement of DC
	Principles of measurement of DC current
	Principles of measurement of AC voltage
5th	Principles of measurement of AC current
	Principles of operation and construction of permanent magnet moving coil (PMMC) instruments
	Moving iron type instruments,VOM meter
6th	Class work and revision.
	Class work and revision.
	1st Sessional Test
7th	Unit-3 Cathode Ray Oscilloscope- Construction and working of Cathode Ray Tube(CRT)
	Block diagram description of a basic CRO and triggered sweep oscilloscope
	Front panel controls
8th	Specifications of CRO and their explanation
	Measurement of current, voltage, frequency
	Measurement of current time period and phase using CRO
9th	Digital storage oscilloscope (DSO) block diagram and working principle
	Class work/Assignment and revision.
	Class work/Assignment and revision.
10th	Unit -4 Impedance Bridge Q Meter & function generator, Dc bridge
	AC bridges: Maxwell's induction bridge
	Hay's bridge

11th	De-Sauty's bridge
	Block diagram description of laboratory type RLC bridge, specifications of RLC bridge
	Block diagram and working principle of Q meter and revision
12th	2nd Sessional Test
	Explanation of block diagram specifications of low frequency, RF generators pulse generator, function generator
13th	Revision
	Instrumentation amplifier: its characteristics, need and working
	Unit -5 Digital Instruments- Comparison of analog and digital instruments
14th	Working principle of ramp, dual slope digital voltmeter.
	Working principle of integration type digital voltmeter
	Block diagram and working of a digital multi-meter
15th	Specifications of digital multi-meter and their applications
	Limitations of digital multi-meters
	Working principle of logic probe, logic pulser
16th	Revision
	Revision
	3rd Sessional Test

Lesson Plan

Name of the Faculty : Sh.Rakesh Manchanda

Discipline : Electronics and Communication Engg.

Semester : 2nd

Subject : ELECTRONICS INSTRUMENTS & MEASUREMENTS

Lesson Plan Duration: Feb. 2024-June24

Work Load (Practical) per week (in hours): 8 hours (4×2=8)

Week	Practical
1 st	
2 nd	Measurement of voltage, resistance, frequency using analog multimeter
3 rd	Measurement of voltage, resistance, frequency using digital multimeter
4 th	To study the front panel controls of CRO
5 th	Measurement of voltage, frequency, time period and phase using CRO
6 th	Measurement of voltage, frequency, time and phase using DSO
7 th	Measurement of phase using lissajous pattern on CRO.
8 th	Measurement of unknown resistance using Wheat Stone bridge.
9 th	
10 th	Measurement of Q of a coil
11 th	Measurement of resistance and inductance of coil using RLC Bridge
12 th	Measurement of inductance using Maxwell Induction Bridge
13 th	
14 th	Measurement of capacitance using De Sauty's Bridge.
15 th	Measurement of distortion using Distortion Factor Meter
16 th	Use of logic pulser and logic probe

Lesson Plan of 4th Semester

Lesson Plan Duration : FEB 2024 -JUNE 2024 work Load (Lecture) per week (in hours): 2 HOURS (Theory)

Name of the Faculty: Pooja Malik Discipline : Electronics and Communication Engg. Subject :MOOC Sem: IVth

Week	Theory		Week	Theory	
	Lecture day	Topic (including assignment/ test)		Lecture day	Topic (including assignment/ test)
1	1	1. Quality and Total Quality Management: Excellence in manufacturing/service	8	22	Quality function development (QFD)
	2	Factors of excellence relevance of TQM.		23	Solving process
	3	2. Concept and definition of quality		24	QC Tools
2	4	Total quality control (TQC) and Total Quality Management (TQM)	9	25	Assignment 2
	5	Salient features of TQC and TQM		26	Test
	6	Total Quality Management Models		27	9. Benchmarking: Definition concept process
3	7	Benefits of TQM	10	28	and types of benchmarking
	8	3. Just in Time (JIT) Definition: elements, benefits, equipment layout for JIT system		29	10. Quality System: Concept of quality system
	9	Kanban system MRP vs JIT		30	standards: relevance and origin of FSO 9000
4	10	Waste elimination workers involvement through JIT: JIT cause and effect chain	11	31	Benefits and elements of FSO 9001
	11	JIT Implementation		32	FSO 9002
	12	Assignment 1		33	FSO 9003
5	13	Test	12	34	11. Advanced techniques of TQM
	14	4. Customer: Satisfaction, data collection and complaint		35	Design of experiments

	15	Redressal mechanism		36	failure mode effect analysis
6	16	5. Planning Process: factors affecting process management	13	37	Taguchi methods
	17	Quality assurance system		38	Assignment 3
	18	7. Total employees Involvement (TEI): empowering employees, team building		39	Revision
7	19	Quality circles, rewards, Recognition	14	40	Revision
	20	Education and training, Suggestion schemes		41	Test
	21	8. Problem solving: definition, problem identification		42	Revision

Lesson Plan Duration : FEB 2024 -JUNE 2024 work Load (Lecture/ Practical) per week (in hours): 3 HOURS (Theory) + 04 HOURS (02 Hours*2 Groups) (PRACTICAL)

Name of the Faculty: Pooja Malik Discipline : Electronics and Communication Engg. Subject :CS Semester : IVth

Week	Theory		Practical	Week	Theory		Practical
	Lecture day	Topic (including assignment/ test)	Topic		Lecture day	Topic (including assignment/ test)	Topic
1	1	UNIT I: Need for modulation	Observe waveforms at input and output of pulse code modulator with CRO.	8	22	Noise triangle, Role of limiter	Observe wave forms at input and output of PSK modulators
	2	Frequency translation and demodulation in communication systems			23	Need for pre-emphasis and de-emphasis	
	3	Basic scheme of a modern communication system.			24	Capture effect	
2	4	UNIT II: Derivation of expression for an amplitude modulated wave	To observe an AM wave on CRO produced by a standard signal generator using internal and external modulation	9	25	Comparison of FM and AM in communication systems	VIVA -VOICE
	5	Carrier and side band components			26	UNIT IV: Basic block diagram of digital and data communication systems and comparison	
	6	Modulation index.			27	Sampling theorem and its basic concept.	
3	7	Spectrum and BW of AM Wave.	VIVA -VOICE	10	28	Assignment no. 2	Observe wave forms at input and output of ASK modulators
	8	Relative power distribution in carrier and side bands			29	Revision of chapter 3	
	9	Elementary idea of DSB-SC			30	2nd sessional exam	
4	10	SSB-SC, ISB	To measure the modulation index of the wave obtained in above practical	11	31	Introduction to PAM, PPM, PWM	Observe wave forms at input and output of FSK modulators
	11	VSB modulations, their comparison, and areas of applications			32	Quantization and error of Quantization	
	12	Assignment no. 1			33	PCM, DPCM, their advantage and disadvantages	
5	13	Revision of chapter 1	To obtain an FM wave and measure the frequency deviation for different modulating	12	34	DELTA and ADAPTIVE DELTA Modulation concept of COMPANDING	VIVA -VOICE
	14	Revision of chapter 2			35	Frequency hopping spread spectrum	

			signals			technique.	
	15	1st sessional exam			36	UNIT V: Basic block diagram and principle of working of - Amplitude shift keying (ASK): Interrupted continuous wave (ICW), two tone modulation	
6	16	UNIT III: Expression for frequency modulated wave and its frequency spectrum	VIVA -VOICE	13	37	Frequency Shift keying (FSK) - Phase shift keying (PSK)	VIVA -VOICE
	17	Modulation index			38	Quadrature Phase Shift Keying (QPSK)	
	18	Maximum frequency deviation and deviation ratio			39	Assignment no. 3	
7	19	BW of FM signals	Observe wave forms at input and output of QPSK modulators	14	40	Revision of chapter 4	VIVA -VOICE
	20	Carson's rule			41	Revision of chapter 5	
	21	Effect of noise on FM carrier			42	3 rd sessional exam	

Specimen of lesson Plan Duration: Feb-June-2024
 Name of the Faculty: Sh. Sandeep Goel
 Discipline: Electronics and Communication Engg.
 Subject: POWER ELECTRONICS
 Semester: IVth Work Load (Lecture/Practical) per week (in hours):03HOURS(Theory)+08H hours):03HOURS (Theory)+08H

Week	Theory		Practical	Theory		Practical	
	Lecture	Topic(including assignment/test)	Topic	Lecture	Topic(including assignment/test)	Topic	
1 st	1	Introduction to thyristors and other Power Electronics Devices	Top lot VI characteristic of SCR.	10 th	28	Introduction, types & basic working Principle of dual converters	Viva
	2	Role of Power electronics			29	Introduction, types & basic working Principle of cycle converters	
	3	Construction, working principles of SCR			30	Their applications.	
2 nd	4	Two transistor analogy of SCR, V-I characteristics of SCR.	Top lot VI characteristics of TRIAC.	11 th	31	2nd Sessional Test	To observe wave shapes and measurement of voltage at relevant points in TRIAC based AC phase control circuit for .
	5	SCR specifications & ratings			32	Discussion about 2nd sessional	
	6	$\frac{di}{dt}$ & $\frac{dv}{dt}$ protection of SCR			33	Thyristorised Control of Electric drives	
3 rd	7	Different methods of SCR triggering. Different commutation circuits for SCR.	Top lot VI characteristics of UJT.	12 th	34	DC drive control	To observe output wave shapes in a circuit for single phase full wave controlled rectifier.
	8	Construction & working principle of DIAC, TRIAC and their V-I characteristics.			35	Half wave drives, Full wave drives	
	9	Construction, working principle of UJT, V-I characteristics of UJT			36	Chopper drives (Speed control of DC motor using choppers)	
4 th	10	UJT as relaxation oscillator.	Revision	13 th	37	AC drive control	To study installation of UPS system and routine maintenance of batteries.
	11	Basic idea about the selection of Heat sink for thyristor			38	Phase control, Constant V/F operation	
	12	Applications such as light intensity control			39	Cycloconverter,	
5 th	13	Speed control of universal motors,	Viva	14 th	40	Uninterrupted Power supplies	Revision
	14	fan regulator, battery charger.			41	Inverter drives.	
	15	Controlled Rectifiers			42	UPS, on-line,	
6 th	16	1st Sessional Test	Top lot VI characteristics of DIAC.	15 th	43	offline & its specifications	Visit to any Solar Power Plant.
	17	Single phase half wave controlled rectifier with load (R, R-L)			44	Concept of high voltage DC transmission	
	18	Single phase half controlled full wave rectifier (R, R-L)			45	Classification of batteries	
7 th	19	Single phase fully controlled full wave bridge rectifier.	To study UJT relaxation oscillator and observed different wave forms	16 th	46	REVISION	Revision
	20	Single phase full wave center tap rectifier.			47	REVISION	
	21	Inverters, Choppers, Dual Converters and Cycloconverters.			48	REVISION	
8 th	22	Principle of operation of basic inverter circuits,	To observe wave shapes at relevant points of single	17 th	49	REVISION	Viva
	23	concept of duty cycle			50	REVISION	
	24	series & parallel, inverters & their applications.			51	3rd Sessional Test	
9 th	25	Choppers: Introduction, types of choppers (Class A, Class B, Class C and Class D)	Revision				
	26	Step up and step down choppers.					
	27	Dual Converters and cycloconverters:					

Lesson Plan Duration : FEB 2024 -JUNE 2024 work Load (Lecture/ Practical) per week (in hours): 3 HOURS (Theory) + 08 HOURS (04 Hours*2 Groups) (PRACTICAL)

Name of the Faculty: Dr. Inderjeet Singh Dhindsa Discipline : Electronics and Communication Engg. Subject: MP&MC Semester : IVth

Week	Theory		Practical	Week	Theory		Practical
	Lecture day	Topic (including assignment/ test)			Topic	Lecture day	
1	1	UNIT I: Introduction to Microprocessors and Microcontrollers, Basic Introduction and comparison of Microcomputer, Microprocessor, and Microcontroller	Understand 8051 development board	8	22	Modes of serial communication	Viva- Voice
	2	Selection of Microcontroller, Introduction to 8051- History			23	8051 connection to RS232	
	3	Architecture, Pin Diagram of 8051			24	Interrupts	
2	4	Crystal Circuit, Reseat Circuit	Generating Hex File using Keil Compiler	9	25	Assignment no. 2	Programming for A/D converter, result on LCD
	5	UNIT II: Different Types of Programming languages for 8051, Advantages of Programming in C			26	Revision of chapter 3	
	6	Addressing Modes			27	Revision of chapter 4	
3	7	Instruction Set of 8051	Viva- Voice	10	28	2 nd Sessional Exam	Viva- Voice
	8	Types of Instructions			29	UNIT V: Real World Interfacing with 8051	
	9	Data types and time delay in 8051			30	I/O Interfacing – LED	
4	10	I/O programming in 8051 C	Programming and interfacing of RELAY and Buzzer	11	31	Interfacing with LCD	Programming for D/A converter, result on LCD
	11	Hex file generation using Keil Compiler			32	Keyboard Interfacing	
	12	Assignment no. 1			33	ADC Interfacing	
5	13	Revision of chapter 1 and 2	Programming to interface switches and LEDs	12	34	DAC Interfacing	Interfacing Stepper Motor with 8051.
	14	Revision of 1 st sessional exam			35	Sensor Interfacing	
	15	1 st sessional exam			36	Signal Conditioning	
6	16	UNIT III: Timers and Registers of 8051	Viva- Voice	13	37	Revision of chapter 5	Interfacing different sensors with 8051.
	17	Timer / Counter logic and modes			38	Assignment No. 3	

	18	Programming of 8051 timers			39	Revision of 3 rd Sessional Exam	
7	19	Programming Timer 1 using C	Programming and interfacing of LCD	14	40	3 rd Sessional exam	VIVA-VOICE
	20	UNIT IV: Serial Port of 8051 –Basics of serial communication			41	Revision	
	21	Serial Communication-SCON, SBUF			42	Revision	

Lesson Plan of 6th Semester

Lesson Plan			
Name of the Faculty :		Dr. Adish Bindal	
Discipline:		Electronics & Communication Engg.	
Semester :		6th	
Subject :-		MICROWAVE AND RADAR ENGG.	
Lesson Plan Duration :		Feb.2024 -June 2024	
Work Load (Lecture/Practical)per week (in hours): 04 HOURS (Lecture) 04Hours per Group (PRACTICAL)			
Week	Theory		Practical
	Lecture	Topic (including assignment /test)	Topic
1st	1	Introduction to microwaves and its	General idea's for lab Equipment's
	2	Introduction to microwaves and its	
	3	Classification on the basis of its frequency	
	4	QUIZ	
2nd	5	Construction, characteristics, operating	To measure the electronics and mechanical tuning range of a reflex klystron
	6	Reflex klystron	
	7	Multi-cavity magnetron	
	8	Traveling wave tube	
3rd	9	Gunn diode	To measure the electronics and mechanical tuning range of a reflex klystron
	10	Impatt diode	
	11	Assignment/Quiz	
	12	Revision	
4th	13	Revision	To measure VSWR of a given load.
	14	Revision	
	15	Application of Microwave	
	16	QUIZ	
5th	17	1st Sessional Test	To measure VSWR of a given load.
	18	Wave guides	
	19	Rectangular and circular wave guides and	
	20	Rectangular and circular wave guides and	
6th	21	Mode of wave guide	To measure the Klystron frequency by slotted section method
	22	Propagation constant of a rectangular wave	
	23	cut off wavelength	
	24	Guide wavelength and their relationship with	
7th	25	Impossibility of TEM mode in a wave guide.	To measure the Klystron frequency by slotted section method
	26	Revision	
	27	Assignment	
	28	Microwave Components	
8th	29	Constructional features, characteristics and	Revision
	30	Bends, matched termination, twists	
	31	Circulator and duplex, coaxial to wave guide	
	32	Detector, mount, slotted section	
9th	33	Directional coupler, fixed and variable	To measure the directivity and coupling of a directional coupler.
	34	Isolator	
	35	Horn antenna	
	36	Revision	
10th	37	2nd Sessional Test	To measure the directivity and coupling of a directional coupler.
	38	2nd Sessional Test Revision	

	39	Microwave Communication system	
	40	Block diagram and working principles of	
11th	41	Block diagram and working principles of	To plot radiation pattern of a horn antenna in horizontal and vertical planes.
	42	Layers of ionosphere	
	43	Troposcatter Communication-basic idea	
	44	Revision	
12th	45	Radar Systems(Introduction to radar)	To plot radiation pattern of a horn antenna in horizontal and vertical planes.
	46	Radar various applications,	
	47	Radar range equation and its applications	
	48	Block diagram and operating principles of	
13th	49	Concepts of ambiguous range	To verify the properties of H Plane /E Plane tee.
	50	Radar area of cross-section and its	
	51	Assignment	
	52	Block diagram and operating principles of CW	
14th	53	FMCW radars, and their applications.	To verify the properties of H Plane /E Plane tee.
	54	Block diagram and operating principles of	
	55	Radar display- PPI	
	56	Revision	
15th	57	3rd Sessional Test	To verify the properties of magic tee.
	58	Discussion of 3rd Sessional Test	
	59	Quiz	
	60	Revision	
16th	61	Revision	To verify the properties of magic tee.
	62	Quiz	
	63	Revision	
	64	Revision	
17th	65	Revision	Revision/Viva
	66	Quiz	
	67	Revision	
	68	Revision	

Specimen of lesson Plan Duration : Feb - June 2024					
Discipline : ECE		Name of the Faculty : Sh. Sandeep Goel		Subject : Embedded Systems	
Semester : 6th					
Work Load (Lecture/ Practical) per week (in hours): 04 HOURS (Theory)					
Week	Theory		Week	Theory	
	Lecture day	Topic (including assignment/ test)		Lecture day	Topic (including assignment/ test)
1 st	1	Introduction about Embedded system	10 th	37	Programming concepts of microcontrollers
	2	History of embedded systems		38	Programming concepts of microcontrollers
	3	Embedded system architecture		39	Programming concepts of microcontrollers
	4	Embedded system architecture		40	Programming concepts of microcontrollers
2 nd	5	Functional structure of embedded system	11 th	41	Programming concepts of microcontrollers
	6	Functional structure of embedded system		42	2nd Sessional Test
	7	Functional structure of embedded system		43	Basic introduction of Software used in microcontrollers
	8	Functional structure of embedded system		44	Basic introduction of Software used in microcontrollers
3 rd	9	Embedded operating systems	12 th	45	Basic introduction of Software used in microcontrollers
	10	Real-time operating system		46	Basic introduction of Software used in microcontrollers
	11	Factors affecting embedded systems		47	Basic introduction of Software used in microcontrollers
	12	Applications of embedded systems		48	transfer C or ASM code in microcontrollers
4 th	13	Applications of embedded systems	13 th	49	transfer C or ASM code in microcontrollers
	14	Embedded systems characteristics		50	transfer C or ASM code in microcontrollers
	15	Embedded systems features		51	transfer C or ASM code in microcontrollers
	16	Reliability of embedded systems		52	transfer C or ASM code in microcontrollers
5 th	17	Embedded systems versus general purpose systems	14 th	53	Comparison between 8051, PIC and AVR
	18	Selection criteria of microcontroller		54	Comparison between 8051, PIC and AVR
	19	Revision		55	Comparison between 8051, PIC and AVR
	20	Revision		56	Steps involved in interfacing of LED
6 th	21	1st Sessional Test	15 th	57	Steps involved in interfacing of 7-segment display
	22	Introduction of PIC microcontroller		58	Steps involved in interfacing of buzzer
	23	Introduction of PIC microcontroller		59	Steps involved in interfacing of relay
	24	Block diagram of PIC microcontroller		60	Steps involved in interfacing of sensors
7 th	25	Block diagram of PIC microcontroller	16 th	61	REVISION
	26	Function of each block		62	REVISION
	27	Function of each block		63	REVISION
	28	Introduction of AVR microcontroller		64	REVISION
8 th	29	Introduction of AVR microcontroller	17 th	65	REVISION
	30	Block diagram of AVR microcontroller		66	REVISION
	31	Block diagram of AVR microcontroller		67	REVISION
	32	Function of each block		68	3rd Sessional Test
9 th	33	Function of each block			
	34	Programming concepts of microcontrollers			
	35	Programming concepts of microcontrollers			
	36	Programming concepts of microcontrollers			

LessonPlan

Name of the Faculty: RAVINDER SINGH PUNIA
Discipline: Electronics & Communication Engg.
Semester: 6th
Subject: WIRELESS MOBILE COMMUNICATION
Lesson Plan Duration: Feb.2024-June2024
Work Load(Lecture/Practical) per week(hours):04HOURS (Lecture) 04 Hours per Group(PRACTICAL)

Week	Theory		Practical
	Lecture Day	Topic(including assignment/test)	Topic
1st	1	CH-1 Wireless Communication , Introduction about Subject	Introduction about Practical WIRELESS AND MOBILE COMMUNICATION
	2	Basics	
	3	Advantages of wireless communication	
	4	Electromagnetic waves	
2nd	5	Basic of frequency Spectrum used	Study the features, specification and working of cellular mobile
	6	Cellular Network System	
	7	Propagation Considerations	
	8	Propagation Considerations, Assignment-1	
3rd	9	CH-2 Cellular Concept , Introduction to 1G and 2G	Measurement of Signal strength at various points from a transmitting antenna/cordless phone
	10	Cell area	
	11	Cell Site Structure	
	12	Capacity of cell	
4th	13	Frequency Reuse (Concept)	Measurement of Signal strength at various points from a transmitting antenna/cordless phone
	14	Co-channel Interference, Adjacent channel Interference	
	15	Power Control for reducing Interference	
	16	Fundamental of Cellular network planning, Coverage	
5th	17	Capacity and Cell splitting and sectoring	Demonstration of Base Trans Receiver (BTS) with nearby cellular tower
	18	Revision and Assignment	
	19	1st Sessional	
	20	CH-3, Multiple Access Techniques for Wireless Communication , Introduction	
6th	21	Frequency Division Multiple Access (FDMA)	Demonstration of Base Trans Receiver (BTS) with nearby cellular tower
	22	Time Division Multiple Access (TDMA)	
	23	Distinction between TDMA FDD and TDMA TDD	
	24	Code Division Multiple Access(CDMA)	
7th	25	WCDMA	Observing call processing of GSM trainer Kit
	26	Revision	
	27	CH-4, Introduction of Mobile Communication Systems	
	28	Introduction of Global Systems for Mobile Communication (GSM) and its Architecture	
8th	29	Introduction of CDMA System	Observing call processing of GSM trainer Kit
	30	Comparison of CDMA and GSM Systems	
	31	Introduction of GPRS System.	
	32	Introduction to EDGE	

9th	33	Introduction to Bluetooth,	Visit to Mobile Switching Centre (MSC)
	34	Introduction to Wi-Fi	
	35	Revision	
	36	Revision and Assignment	
10th	37	2ndSessional Test	Visit to Mobile Switching Centre (MSC)
	38	CH-5, Introduction to 3G And 4G	
	39	Introduction to Architecture and features of UMTS	
	40	High Speed Packet Access ,HSPA	
11th	41	Features and Architectures of LTE (Long Term evolution)	Repairing of a GSM Mobile Phone
	42	Features and Architectures of LTE (Long Term evolution)	
	43	Revision	
	44	Assignment	
12th	45	CH-6, Troubleshooting GSM Mobile Phone	Repairing of a GSM Mobile Phone
	46	Assembling of GSM phone	
	47	Assembling of GSM phone	
	48	Disassembling of GSM phone	
13th	49	Disassembling of GSM phone	Repairing of GSM Mobile Phone
	50	Study Parts of Mobile Phones	
	51	Study Parts of Mobile Phones	
	52	Testing of Various Parts	
14th	53	Testing of Various Parts	Repairing of GSM Mobile Phone
	54	Testing of Various Parts	
	55	Revision	
	56	Quiz	
15th	57	3rdSessional Test	Revision/Viva
	58	Discussion of 3 rd SessionalTest	
	59	Revision of Previous year question papers.	
	60	Revision of Previous year question papers	
16th	61	Revision of Previous year question papers	Revision/Viva
	62	Revision of Previous year question papers	
	63	Revision of Previous year question papers	
	64	Revision of Previous year question papers	
17th	65	Revision of Previous year question papers	Revision/Viva
	66	Revision of Previous year question papers	
	67	Revision of Previous year question papers	
	68	Revision of Previous year question papers	

Lesson Plan

Name of the Faculty		Vijender Kumar		
Discipline		Electronics and Communication Engg.		
Semester		6th		
Subject		Entrepreneurship Development and Management		
Lecture per Week		3		
Lesson plan Duration		15 Feb 2024 - 31 May 2024 (16 weeks)		
Week	Lecture Day	Topic (including assignment / test)	Delivery Date of Lecture	Remarks
1st	SECTION - A Unit-1-Introduction:			
	1st	Introduction		
	2nd	Introduction/ Syllabus		
2nd	1st	Concept/Meaning and its need		
	2nd	Sole proprietorship and partnership forms and other forms of business organisations		
	3rd	Schemes of assistance by entrepreneurial support agencies at National, State, District – level, organisation: NSIC, NRDC, DC, MSME, SIDBI, NABARD, NIESBUD, HARDICON Ltd.		
3rd	2nd	Commercial Banks, SFC's TCO, KVIB, DIC,		
	3rd	Technology Business Incubators (TBI) and Science and Technology Entrepreneur Parks		
	Unit-2 - Market Survey and Opportunity Identification/Ideation			
4th	1st	Scanning of the business environment		
	2nd	Salient features of National and Haryana State industrial policies and resultant business opportunities		
	3rd	Types and conduct of market survey		
5th	1st	Assessment of demand and supply in potential areas of growth		
	2nd	Identifying business opportunity, Considerations in product selection		
	3rd	Converting an idea into a business opportunity		
6th	1st Sessional Test			
	Unit-3- Project Report Preparation			

	1st	Detailed project report including technical, economic and market feasibility , Common errors in project report preparations		
	2nd	Exercises on preparation of project report,Sample project report		
7th	SECTION -B Unit-4 Constructi on Labour			
	1st	Introduction to Management, Definitions and importance of management		
	2nd	Functions of management: Importance and process of planning, organising, staffing, directing and controlling		
	3rd	Principles of management (Henri Fayol, F.W. Taylor),Concept and structure of an organisation		
8th	1st	Types of industrial organisations and their advantages,Line organisation		
	2nd	Staff organisation,Line and staff organisation.		
	3rd	Functional Organisation		
9th	Unit-5 -Leadership and Motivation			
	1st	a) Leadership : Definition and Need,Qualities and functions of a leader,Manager Vs leader		
	2nd	Types of leadership,Case studies of great leaders		
	3rd	b) Motivation : Definition and characteristics, Importance of self motivation, Factors affecting motivation		
10th	1st	Theories of motivation (Maslow, Herzberg, Douglas, McGregor)		
	Unit-6 - Management Scope in Different Area			
	2nd	a) Human Resource Management : Introduction and objective, Introduction to Man power planning, recruitment and selection, Introduction to performance appraisal methods		
	3rd	b) Material and Store Management : Introduction functions, and objectives,ABC Analysis and EOQ		
11 th	1st	c) Marketing and sales : Introduction, importance, and its functions,Physical distribution,Introduction to promotion mix,Sales promotion		
	2nd	d) Financial Management : Introductions, importance and its functions, knowledge of income tax, sales tax, excise duty, custom duty, VAT, GST		
	2nd Sessional Test			
12th	Unit-7 - Work Culture			
	1st	Introduction and importance of Healthy Work Culture in organization		

	2nd	Components of Culture, Importance of attitude, values and behaviour Behavioural		
	3rd	Science – Individual and group behavior.		
13th	1st	Professional ethics – Concept and need of Professional Ethics and human values.		
	Unit-8 - Basic of Accounting and Finance			
	2nd	a) Basic of Accounting: - Meaning and definition of accounting,		
	3rd	Double entry system of book keeping		
14th	1st	Trading account		
	2nd	PLA account and balance sheet of a company		
	3rd	b) Objectives of Financial Management - Profit Maximization v/s Wealth Maximization		
	Unit- 9 Miscellaneous Topics			
15th	1st	a) Total Quality Management (TQM) Statistical process control, Total employees Involvement		
	2nd	b) Intellectual Property Right (IPR) Introduction, definition and its importance		
	3rd	Infringement related to patents, Just in time (JIT)		
16th	1st	Copy right,		
	2nd	Trade mark		
	3rd Sessional Test			

