

Lesson Plan of 2nd Semester

| Lesson Plan Duration : JAN 2026 -MAY 2026 work Load (Lecture/ Practical) per week (in hours): 3 HOURS (Theory) + 08 HOURS (04 Hours*2 Groups) (PRACTICAL) | | | | | | | |
|--|-------------|---|--|------|-------------|---|--|
| Name of the Faculty: Dr. Pooja Malik Discipline : Electronics and Communication Engg. Subject :EDC-I Semester : II nd | | | | | | | |
| Week | Theory | | Practical Topic | Week | Theory | | Practical Topic |
| | 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 | 12 | 34 | Single stage transistor amplifier circuit | Measurement of voltage gain, |

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| | 14 | Revision of 1 st sessional exam | output of positive clamping circuit. | | 35 | Concept of dc and ac load line and its use. Explanation of phase reversal of output voltage with respect to input Voltage. | input, and output impedance in a single stage CE amplifier circuit. |
| | 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 Duration : JAN 2026 -MAY 2026 work Load (Lecture/ Practical) per week (in hours): 3 HOURS (Theory) + 04 HOURS (04 Hours*2 Groups) (PRACTICAL)

Name of the Faculty: VF Discipline : Electronics and Communication Engg. Subject :EIM Semester : IInd

| Week | Theory | Practical |
|------------------|---|--|
| | Topic (including assignment/ test) | |
| 1 st | Introduction about subject Syallabus of the subject | |
| 2 nd | Unit-1.Basics of measurements- Measurement, method of measurement, types of instruments Specifications of instruments Accuracy, precision Specifications of instruments sensitivity, resolution, range, errors in measurement | Measurement of voltage, resistance, current using analog multimeter |
| 3 rd | sources of errors, limiting errors, loading effect, importance and applications of standards and calibration Class work/Assignment and revision. | Measurement of voltage, resistance, frequency using digital multimeter |
| 4 th | Unit-2 .Voltage ,Current and Resistance Measurement- Principles of measurement of DC voltage Principles of measurement of DC current Principles of measurement of AC voltage | To study the front panel controls of CRO |
| 5 th | Principles of measurement of AC current Principles of operation and construction of permanent magnet moving coil (PMMC) instruments 1st Sessional Test | Measurement of voltage, frequency, time period and phase using CRO |
| 6 th | Moving iron type instruments VOM meter Class work and revision. | Measurement of voltage, frequency, time and phase using DSO |
| 7 th | Unit-3. Cathod Ray Oscilloscope-Construction and working of Cathode Ray Tube(CRT) Block diagram description of a basic CRO and triggered sweep oscilloscope Front panel controls | Measurement of phase using lissajous pattern on CRO. |
| 8 th | Specifications of CRO and their applications Measurement of current, voltage, frequency using CRO Measurement of time period and phase using CRO | Measurement of unknown resistance using Wheat Stone bridge. |
| 9 th | lissajous pattern for phase measurement Digital storage oscilloscope (DSO): block diagram and working principle Class work/Assignment and revision. | Measurement of Q of a coil |
| 10 th | Unit-4.Impedance Bridge & Q Meter- Wheat stone bridge AC bridges: Maxwell's induction bridge 2nd Sessional Test | Measurement of inductance using Hay's Bridge. |
| 11 th | Hay's bridge, De-Sauty's bridge, Block diagram and working principle of Q meter | Measurement of inductance using Maxwell Induction Bridge. |
| 12 th | Explanation of block diagram, specifications of low frequency generator RF generators pulse generator, function generator | Measurement of impedance using Maxwell Induction Bridge |
| 13 th | Unit-5.Digital Instruments- Comparison of analog and digital instruments Block diagram and working of a digital multi-meter | Measurement of impedance using Maxwell Induction Bridge |

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| | Revision | |
| 14 th | Applications and Limitations of digital multi-meters. | Measurement of capacitance using De Sauty's Bridge. |
| | Working principle of logic probe, logic pulser analyzer | |
| 15 th | Revision | Revision |
| | Revision | |
| | 3rd Sessional Test | |

Lesson Plan of 4th Semester

| Lesson Plan Duration : JAN 2026 -MAY 2026 work Load (Lecture/ Practical) per week (in hours): 3 HOURS (Theory) + 04 HOURS (02 Hours*2 Groups) (PRACTICAL) | | | | | | | |
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| Name of the Faculty: Dr. 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: AM/FM Transmitters Introduction | To observe the waveforms at different stages of an AM low power transmitter. | 8 | 22 | folded dipole, patch, loop | To plot the radiation pattern of a directional and omni directional antenna |
| | 2 | Classification of transmitters on the basis of modulation, service, frequency and power | | | 23 | Ferrite rod Antenna | |
| | 3 | Block diagram of AM transmitters and working of each stage | | | 24 | Yagi antenna | |
| 2 | 4 | Block diagram and working principles of reactance FET | To observe the waveforms at different stages of a Radio Receive | 9 | 25 | dish antenna | VIVA -VOICE |
| | 5 | Armstrong FM transmitters. | | | 26 | UNIT IV Propagation, Introduction | |
| | 6 | Unit-II AM/FM Radio Receivers Introduction | | | 27 | Basic idea about different modes of wave propagation and typical areas of application | |
| 3 | 7 | Principle and working with block diagram of super heterodyne AM receiver | VIVA -VOICE | 10 | 28 | Assignment no. 2 | To plot the variation of field strength of a radiated wave, with distance from a transmitting antenna |
| | 8 | Performance characteristics of a radio receiver: sensitivity, selectivity, fidelity | | | 29 | Revision of chapter 3 | |
| | 9 | S/N ratio, image rejection ratio and their measurement procedure. | | | 30 | 2nd sessional exam | |
| 4 | 10 | Concepts of simple and delayed AGC. | To align AM broadcast radio receiver. | 11 | 31 | Ground wave propagation and its characteristics | To study and rectify different faults in a broadcast radio receiver. |
| | 11 | Block diagram of an FM receiver | | | 32 | Space wave communication – line of sight propagation, standard atmosphere | |
| | 12 | Assignment no. 1 | | | 33 | Structure of standard atmosphere | |
| 5 | 13 | Revision of chapter 1 | To align the dish antenna. | 12 | 34 | Sky wave propagation - | VIVA -VOICE |

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| | | | | | | ionosphere and its layers. Explanation of terms - virtual height, critical frequency | |
| | 14 | Revision of chapter 2 | | | 35 | skip distance, maximum usable frequency, multiple hop propagation. | |
| | 15 | 1st sessional exam | | | 36 | UNIT V Satellite Communication Introduction | |
| 6 | 16 | UNIT III: Antenna Electromagnetic spectrum and its various ranges: VLF, LF, MF, HF, VHF, UHF, Microwave | VIVA - VOICE | 13 | 37 | Basic idea, passive and active satellites, | VIVA -VOICE |
| | 17 | Physical concept of radiation of electromagnetic energy from a dipole | | | 38 | Meaning of the terms; orbit, apogee, perigee | |
| | 18 | Concept of polarization of EM Waves. | | | 39 | Geo-stationary satellite and its need. Block diagram and explanation of a satellite communication link. | |
| 7 | 19 | Definition and physical concepts of the terms used with antennas like point source, gain directivity, aperture, effective area, | To identify and study the various types of antennas used in different frequency ranges. | 14 | 40 | Introduction to VSAT and its features. | VIVA -VOICE |
| | 20 | Radiation pattern, beam width and radiation resistance, loss resistance. | | | 41 | Assignment No. 3 | |
| | 21 | - Types of antennas- brief description, characteristics and typical applications of half wave dipole | | | 42 | 3 rd sessional exam | |

| SpecimenoflessonPlanDuration:Jan-May-2026 | | | | | | | | |
|---|-------------|---|--|------------------|------|--|--|-----------|
| NameoftheFaculty:Dr.SandeepGoel | | | | | | | | |
| Discipline:ElectronicsandCommunicationEngg. | | | Subject:POWRELECTRONICS | | | Semester:IVth | | |
| WorkLoad(Lecture/Practical)perweek(inhours):03HOURS(Theory)+08HOURS(04Hours*2Groups)(PRACTICAL) | | | | | | | | |
| Week | Theory | | Practical | | Week | Theory | | Practical |
| | Lecture day | Topic(including assignment/test) | | Topic | | Lecture day | Topic(including assignment/test) | |
| 1 st | 1 | Introduction to thyristors and other Power Electronics Devices | To plot V-I 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 cycloconverters | | |
| | 3 | Construction, working principles of SCR | | | 30 | their applications. | | |
| 2 nd | 4 | two transistor analogy of SCR, V-I characteristics of SCR. | To plot V-I 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. | To plot V-I characteristics of UJT. | 12 th | 34 | DC drive control | To observe output wave shape 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 heatsink for thyristors. | | | 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 | To plot V-I 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 observe different wave forms | 16 th | 46 | REVISION | Revision | |
| | 20 | Single phase full wave center tap rectifier. | | | 47 | REVISION | | |
| | 21 | Inverters, Choppers, Dual Converters and Cyclo converters. | | | 48 | REVISION | | |
| 8 th | 22 | Principle of operation of basic inverter circuits, | To observe wave shapes at relevant points of single-phase half wave controlled rectifier and effect of change of firing angle. | 17 th | 49 | REVISION | Viva | |
| | 23 | Concepts 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 cyclo converters: | | | | | | |

Lesson Plan Duration : JAN 2026 -MAY 2026 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 | | Topic | Week | Theory | | Practical |
|------|-------------|---|---|------|-------------|--|--|
| | Lecture day | Topic (including assignment/ test) | | | Lecture day | Topic (including assignment/ test) | |
| 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 | | | 41 | Revision | |

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| | | 8051 –Basics of serial communication | | | | |
| 21 | Serial Communication- SCON, SBUF | | | 42 | Revision | |

Lesson Plan of 6th Semester

| Lesson Plan | | | |
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| Name of the Faculty : Dr. Adish Bindal /Dr Pooja malik | | | |
| Discipline: Electronics & Communication Engg. | | | |
| Semester : 6th | | | |
| Subject :- MICROWAVE AND RADAR ENGG. | | | |
| Lesson Plan Duration : JAN 2026 -MAY 2026 | | | |
| 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 | |

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| 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 | |

Name of the Faculty : Sh. Ravinder Singh Punia
Discipline : Electronics and Communication Engg.
Semester : VIth
Subject : MAINTENANCE OF COMPUTER SYSTEM
Lesson Plan Duration : Jan 2026-May 2026

Work Load (Lecture/ Practical) per week (in hours): 02 HOURS (Lecture) 02 Hours per Group (PRACTICAL)

| Week | Theory | | Practical |
|------------------|-------------|---|--|
| | Lecture day | Topic (including assignment/ test) | Topic |
| 1 st | 1 | Introduction about subject | Introduction about Practicals of MOCS |
| | 2 | Introduction to different type of mother boards, | |
| 2 nd | 3 | Single Board Based System, Block diagram of motherboard | Operation, Maintenance, Installation and Testing of Monitors (LCD and LED) |
| | 4 | Installation of Computer System | |
| 3 rd | 5 | Different type of Buses PCI, SCSI | HDD, Partitioning and Formatting |
| | 6 | Serial and Parallel ports (COM ports) Ports COM 1, LPT1 | |
| 4 th | 7 | Principle and construction of Hard Disk Drive (HDD). Hard Disk Controller | Inkjet Printer |
| | 8 | Pen Drives, common faults with hard disk drive, RAM Module | |
| 5 th | 9 | SSD USB. RS 232 C, HDMI | Laser Printer |
| | 10 | 1st Sessional Test | |
| 6 th | 11 | Block Diagram of keyboard Controller, keyboard types and faults, | Mother board based on latest microprocessor and chipset CMOS Set up. |
| | 12 | Types of mouse and its common faults | |
| 7 th | 13 | Introduction to scanner, digitizer and webcam | SSD |
| | 14 | Block Diagram of display devices, | |
| 8 th | 15 | Principle of operation of Computer Monitor | Network Connectors and Cables |
| | 16 | Video display Adaptors | |
| 9 th | 17 | Types of display. | Network Connectors and Cables |
| | 18 | Printing Mechanism | |
| 10 th | 19 | Construction and working principles of Inkjet Printer | ROUTER AND SWITCH |
| | 20 | 2nd Sessional Test | |
| 11 th | 21 | Laser Printer, | ROUTER AND SWITCH |

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| | 22 | Thermal printer, | |
| 12th | 23 | Interfacing of PC with printer | Installation of any operating system. |
| | 24 | Introduction to networking devices | |
| 13th | 25 | Idea about LAN | Installation of any operating system. |
| | 26 | WAN, | |
| 14th | 27 | Wi-Fi | Establish LAN,WLAN, using Networking Devices |
| | 28 | ROUTER | |
| 15th | 29 | SWITCH and HUB | Establish LAN,WLAN, using Networking Devices |
| | 30 | 3rd Sessional Test | |

Govt. Polytechnic, Ambala City

Lesson Plan

Name of the Faculty : Deepender Gill

Department : ECE

Semester : 6th

Subject : Computer Networks

Lesson Plan Duration : 15 weeks (Jan 2026- May 2026)

****Work load (Lecture / Practical) per week(in hours): Lectures-03, Practicals -04**

| Week | Theory | | Practical | |
|------|--------|--|-----------|--|
| | Day | Topics to be covered | Day | Experiment to be performed |
| 1st | 1st | Networks Basics,Concept of network Models of network computing | 1st | Recognize the physical topology of a network Recognize the cabling (coaxial, OFC, UTP, STP) of a network. |
| | 2nd | Network Models Peer-to –peer Network Server Client Network | | |
| | 3rd | Network Services, Topologies | | |
| 2nd | 1st | Switching Techniques | 2nd | Recognition and use of various types of connectors RJ-45, RJ-11, BNC and SCST. |
| | 2nd | OSI Reference Model | | |
| | 3rd | Layered Architecture, TCP/IP Model introduction | | |
| 3rd | 1st | Function of various layers in TCP/IP Model | 3rd | Making of cross cable. Making of straight cable. |
| | 2nd | Comparison OSI and TCP/IPModel | | |
| | 3rd | Revision | | |
| 4th | 1st | Concept of Physical and Logical addressing | 4th | Install and configure a network interface card in a workstation. |
| | 2nd | IPV4 addressers- Address space, Notations | | |
| | 3rd | Classful Addressing, Classless Addressing, Network Address Translation | | |
| 5th | 1st | Classless addressing, Special IP addreses | 5th | Practical file checking and viva-voce |
| | 2nd | Sub netting and Supernetting | | |
| | 3rd | Loop back concept, Network address translation | | |
| 6th | 1st | IPV4 packet Format | 6th | Identify the IP address of a workstation and the class of the address. Configure the IP address of workstation. |
| | 2nd | IPV6 packet Format | | |
| | 3rd | Comparison IP4 and IP6 | | |

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| 7th | 1st | Ethernet specification and standardization | 7th | Managing user accounts in windows |
| | 2nd | 10 Mbps (Traditional Ethernet) | | |
| | 3rd | 10 Mbps (Fast Ethernet) | | |
| 8th | 1st | Gigabit Internet, Introduction to Media Connectivity | 8th | Sharing of hardware resources in a network. |
| | 2nd | Leased lines, ISDN, DSL | | |
| | 3rd | Network connectivity Devices | | |
| 9th | 1st | NICs | 9th | Use of Netstat and its options. |
| | 2nd | Hubs, Switches, Routers | | |
| | 3rd | Repeaters, Modems, Gateways | | |
| 10th | 1st | Configuration of Routers and Switches | 10th | Practical file checking and viva-voce . |
| | 2nd | Network Security, Cryptography, Secure Protocols | | |
| | 3rd | Trouble Shooting Tools: PING, IPCONFIG | | |
| 11th | 1st | IFCONFIG, NETSTAT, TRACEROUTE | 11th | Connectivity troubleshooting using PING, IPCONFIG |
| | 2nd | Wireshark, Nmap, TCDUMP, ROUTEPRINT | | |
| | 3rd | DHCP Server | | |
| 12th | 1st | Workgroup/ Domain Networking | 12th | Connectivity troubleshooting using IFCONFIG |
| | 2nd | Revision | | |
| | 3rd | Introduction to wireless networks, IEEE802.11 | | |
| 13th | 1st | Wi-Max, Li-Fi | 13th | Installation of Network Operating System(NOS) |
| | 2nd | Wireless Security | | |
| | 3rd | Bluetooth architecture and application | | |
| 14th | 1st | Cloud Computing, Definition and advantages | 14th | Demonstration of Cloud Computing in Labs or using Online Videos. |
| | 2nd | Service Model SaaS, PaaS | | |
| | 3rd | IaaS | | |
| 15th | 1st | Deployment: Private and Public Cloud | 15th | Practical file checking and viva-voce . |
| | 2nd | Hybrid Cloud, Community Cloud | | |
| | 3rd | Revision | | |