LESSON PLAN

Name of Faculty	Kharrati lal
Department	Applied Science & Humanities
Semester	2nd
Subject	Mathematics-II
Lesson Plan for the Duration	Jan to May 2026

Week	Topic	Theory
1St (27 Jan - 02 Feb)	Determinants and Matrices	Determinants: Elementary properties of determinants up to 3rd order.
2Nd (03 Feb-09 Feb)	Determinants and Matrices	Consistency of equations & Properties of Determinants. Crammer's rule.
3Rd (10 Feb-17 Feb)	Determinants and Matrices	Matrix: Algebra of matrices, Inverse of a matrix, Matrix inverse method to solve a system of linear equations in 3 variables.
4th (18 Feb -24 Feb)	Determinants and Matrices	Adjoint of square Matrix. Inverse of a square matrix. Properties of the inverse of a Matrix.
5th (25 Feb-03 Mar)	Determinants and Matrices	Solution of system of Linear Equations by Matrices.
6Th (05 Mar-11 Mar)	Integral Calculus	Integral calculus: Simple Integration by substitution method.
	CLASS-TEST I	
7Th (12 Mar – 19 Mar)	Integral Calculus	By parts, by partial fractions (for linear factors only). Use of formulas.
8th (20 Mar – 28 Mar)	Integral Calculus	Applications of integration: Simple problem on evaluation of area bounded by a curve and axes.
9Th (30 Mar -06 Apr)	Integral Calculus	Calculation of Volume of a solid formed by revolution of an area about a curve.
	CLASS-TEST II	
10th (07 Apr -16 Apr)	Co-Ordinate Geometry	Coordinate Geometry: Equations of straight line in various standard forms (without proof).
11th (17 Apr – 23 Apr)	Co-Ordinate Geometry	Inter section of two straight lines, angle between two lines, Perpendicular distance formula.
12th (24 Apr - 30 Apr)	Co-Ordinate Geometry	General equation of a circle and its characteristics, To find the equation of a circle, given: * Centre and radius, Three points lying on it.
13Th (02 May – 08 May)	Co-Ordinate Geometry	Coordinates of end points of diameter. Definition of conics (Parabola, Ellipse, Hyperbola) their standard Equations without proof.
	HOUSE TEST	
14Th (11 May – 16 May)	Co-Ordinate Geometry	Problems on conics when their foci, directrices and vertices are given.
15Th (18 May – 23 May)	Differential Equations	Differential Equations: Solution of first order and first degree differential equation by variable separation method.
16Th (24 May – 27 May)	Differential Equations	Homogeneous Equation.

Signature of Subject Teacher

Signature of HOD

LESSON PLAN

Name of Faculty	Shweta Dhiman
Department	Applied Science & Humanities
Semester	2nd
Subject	Introduction to IT System
Lesson Plan for the Duration	Jan to May 2026

Week	Topic	Theory
1st (27 Jan - 02 Feb)	Basic of Computer System	block diagram of computer system, gernal understanding of various hardware components
2nd (03 Feb-09 Feb)	Basic of Computer System	Study about hardware compnents CPU,Memory,Display Devices mouse, keyboard and HDD
3rd (10 Feb-17 Feb)	Software concepts	software and its types, operating system defination,types and function of operating system
4th (18 Feb - 24 Feb)	Software concepts	Types of operating system, Booting the sytem(cold and warm)
5th (25 Feb-03 Mar)	Internet skills	Understanding the terminology of internet-web browser, search engine, world wide web, Type of networks
6th (05 Mar-11 Mar)	Internet skills	Awareness about the government portals(state portals and national portals) and institute portals
7th (12 Mar - 19 Mar)	Working with MS Word	File management(creating new document, saving document, printing a document)
8th (20 Mar - 28 Mar)	Working with MS Word	Editing a document , use of home ,insert,design layout ribbons.
9th (30Mar -06 Apr)	Working with MS Word	Use of pagelayout, print ,print preview,view ribbons
10th (07 Apr -16 Apr)	Working with MS Excel	working with spread sheeets, entering data into cells, merging cells, formula bar,
11th (17 Apr - 23 Apr)	Working with MS Excel	use of simple functions such as sum,average,min,max,percentage,round, floor, ceiling,
12th (24 Apr - 30Apr)	Working with MS Excel	Conditional formating of cells, Formate table, style, Sort and filter
13th (02 May - 08 May)	Working with MS Excel	Creating student Record, Charts and Graphs
14th (11 May - 16May)	Information Security	Concept of online frauds, threats of online crime,
15th (18May - 23 May)	Information Security	Virus attachs and use of antivirus
16th (24May- 27May)	Internet skills	Web browsers, creation of email ID, sending and attaching files in email

Signature of Subject Teacher

Signature of HOD

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LESSON PLAN

Name of Faculty	Mrs. Ankaj Thakur
Department	Applied Science & Humanities
Semester	2nd
Subject	Environmental Science
Lesson Plan for the Duration	January-May 2026

Week		Theory
1st (27 Jan. – 02 Feb..)	UNIT-I	Structure of Ecosystem,Biotic & Abiotic components, Food Chain & Food Web,Aquatic & Terrestrial Ecosystem.
2nd (03Feb. – 09 Feb.)		Carbon,Nitrogen,Phosphorus cycle,Global Warming-Causes,Effects,Process,GreenHouse Effect,Ozone Depletion.
3rd (10 Feb-17 Feb.)	UNIT-II	Pollution & Pollutants,Natural & Manmade Sources of Air Pollution,Air Pollutants,Types,Particulate Pollutants,Effects & Control.
4th (18 Feb . –24Feb.)		Gaseous Pollution Control,Absorber,Catalytic Converter,Effects of Air Pollution due to Refrigerants.
5th (25 Feb - 03 Mar.)		Noise Pollution,Sources of Pollution,Measurement of Pollution Levels,Effects of Noise Pollution,Noise Pollution Rules 2000.
6th (05 Mar. – 11 Mar.)	UNIT-III	Sources of Water Pollurtion,Types of Water Pollutants,Characteristics of Water Pollutants,Turbidity,Ph,Total suspended solids,Total Solids BOD & COD.
		CLASS TEST -1 2nd week of March 2026
7th (12 Mar. –19 March)	UNIT-III	Waste Water Treatment,Primary Methods: Sedimentation,froath Floating,Secondary Methods: Active Sludge Treatmant,Trickling Filter,Bioreactor,Tertiary Methods: Membrane Separation Technology,Reverse Osmosis.
8th (20 March . –28 March.)		Causes,Effects & Preventive measures of Soil Pollution,Cause,Excessive use of fertilizers,Pesticides,Insecticides,Irrigation,E-Waste.
9th (30 March –06 April)	UNIT-IV	Solar Energy:Basics of solar Energy,Flate Plate Collector,Theory of Flate Plate Collector,Importance of coating,Advanced Collector,Solar Pond,Solar Water Heater,Solar Dryer,Solar Stills.
10th (07 April. – 16 April.)		Biomass:Biomass as energy source,Thermal Characteristics of biomass as fuel,Anaerobic Digestion,Biomass Production Mechanism,Utilization & Storage of Biomass.
		CLASS TEST 2 2nd WEEK OF APRIL 2026
11th (17 April. – 23 April.)	UNIT-IV	Wind Energy:Current Status & Future Prospectus of Wind Energy,Wind energy in India,Environmental Benefits & Problems of Wind Energy
12th (24 April - 30 April)		New Energy Sources,Need of New Sources,Different types of Energy Sources,Applications of Hydrogen Energy,Ocean Energy,Tidal Energy Conversion,Geo Thermal Energy.
13th (02 May-08 May.)	UNIT-V	Solid Waste Generation-Sources & Characteristics of Municipal solid waste,E-Waste,Bio- Mrdical Waste,Mettalic Waste,Non Metallic Waste from Industries.
		HOUSE TEST 2nd WEEK OF MAY 2026
14th (11 May-16 May.)	UNIT-V	Collection & Disposal:MSW(3R,Principal,energy recovery,sanitary landfill,Hazardous,Waste Water Quality Act 2004,Air Pollution control act 1981,Water Pollution Act 1996,Structure & Role of Central & State Pollution Control Board.
15th (18 May-23 May)		Concept of Carbon Credit,Carbon Footprint,Environmental ,anagment in Fabrication Industry,ISO14000 Implementatgion in Indutries,Benefits.
16th (25 May-26 May)	Revision	Revision & Doubt Clearance

Ankaj Thakur
Lecturer Chemistry

Signature of HOD/OIC

LESSON PLAN

Name of Faculty	Ankush Bharti
Department	Applied Science & Humanities
Semester	2nd
Subject	Applied Physics-II
Lesson Plan for the Duration	Jan to May 2026

Week	Topic	Theory
1St (27 Jan - 02 Feb)	Wave Motion & Its applications	Wave motion, transverse and longitudinal waves with examples, definitions of wave velocity, frequency and wave length and their relationship, Sound and light waves and their properties, wave equation (y = rsin ωt) amplitude, phase, phase difference, Principle of superposition of waves and beat formation.
2Nd (03 Feb-09 Feb)	Wave Motion & Its applications	Simple Harmonic Motion (SHM): definition, expression for displacement, velocity, acceleration, time period, frequency etc.Free, forced and resonant vibrations and their examples. Acoustics of buildings – reverberation, reverberation time, echo, noise, coefficient of absorption of sound, methods to control reverberation time and their applications. Ultrasonic waves – Introduction and properties, engineering and medical applications of ultrasonic.
3Rd (10 Feb-17 Feb)	Wave Motion & Its applications	Acoustics of Buildings-Reverberation, reverberation time, echo, noise, co-efficient of absorption of sound, methods to control reverberation time and their applications. Ultrasonic waves-Introduction and properties, engineering and medical applications of ultrasonic.
4th (18 Feb -24 Feb)	Optics	Basic optical laws- reflection and refraction, refractive index, Images and image formation by mirrors, lens and thin lenses, lens formula, power of lens, magnification.
5th (25 Feb-03 Mar)	Optics	Optical Instruments- simple and compound microscope, astronomical telescope in normal adjustment and their magnifying powers.
6Th (05 Mar-11 Mar)	Optics	Total internal reflection, Critical angle and conditions for total internal reflection, applications of total internal reflection in optical fiber.
		CLASS-TEST I
7Th (12 Mar – 19 Mar)	Electrostatics	Coulomb's law, unit of charge. Electric field, Electric lines of force and their properties. Electric flux, Electric potential and potential difference.
8th (20 Mar – 28 Mar)	Electrostatics	Gauss's law, Capacitor and its working, Capacitance and its units. Capacitance of a parallel plate capacitor, Series and parallel combination of capacitors (related numerical), dielectric and its effect on capacitance, dielectric break down.
9Th (30 Mar -06 Apr)	Current Electricity	Electric Current and its units, Direct and alternating current. Resistance and its units, Specific resistance, Conductance, Specific conductance, Series and parallel combination of resistances. Factors affecting resistance of a wire, carbon resistances and colour coding. Ohm's law and its verification.
		CLASS-TEST II
10th (07 Apr -16 Apr)	Current Electricity	Kirchhoff's laws. Concept of terminal potential difference and Electro motive force (EMF) Heating effect of current, Electric power, Electric energy and its units (related numerical problems), Advantages of Electric Energy over other forms of energy.
11th (17 Apr – 23 Apr)	Electromagnetism	Types of magnetic materials: dia, para and ferromagnetic with their properties. Magnetic field and its units, magnetic intensity, magnetic lines of force, magnetic flux and units, magnetization.
12th (24 Apr - 30 Apr)	Electromagnetism	Lorentz force (force on moving charge in magnetic field), Force on current carrying conductor. Moving coil galvanometer; principle, construction and working, Conversion of a galvanometer into ammeter and voltmeter.
13Th (02 May – 08 May)	Semiconductor Physics	Energy bands in solids, Types of materials (insulator, semi-conductor, conductor), intrinsic and extrinsic semiconductors. p-n junction, junction diode and V-I characteristics.
		HOUSE TEST
14Th (11 May – 16 May)	Semiconductor Physics	Diode as rectifier – half wave and full wave rectifier (centre taped). Photocells, Solar cells; working principle and engineering applications.
15Th (18 May – 23 May)	Modern Physics	Lasers: Energy levels, ionization and excitation potentials; spontaneous and stimulated emission; population inversion, pumping methods, optical feedback. Types of lasers; Ruby, He-Ne and semiconductor, laser characteristics,engineering and medical applications of lasers.
16Th (24 May – 27 May)	Modern Physics	Fiber Optics: Introduction to optical fibers, light propagation, acceptance angle and numerical aperture,fiber types, applications in, telecommunication, medical and sensors.

Signature of Subject Teacher

Signature of HOD/OIC

R.G.Government Polytechnic Banikhet,Distt. Chamba H.P-176303

Department of Electrical Engineering

Lesson Plan

Name of Faculty	Er. B.S.Thakur
Discipline	Electrical Engineering
Semester	2nd
Subject	Fundamentals Of Electrical & Electronics Engineering (L-3,Ds-1, Hrs./Week)
Lesson Plan Duration	Jan. – May 2026

Week	Topic	Theory
1st (27 Jan. – 02 Feb.)	Unit – I Overview of Electronic Components & Signals	Passive Active Components: Resistances, Capacitors, Inductors, Diodes, Transistors, FET, MOS and CMOS and their Applications.
2nd (03 Feb. – 09 Feb.)	Unit – I Overview of Electronic Components & Signals	Signals: DC/AC, voltage/current, periodic/non- periodic signals, average, rms, peak values, different types of signal waveforms,
3rd (10 Feb-17 Feb.)	Unit – I Overview of Electronic Components & Signals	Ideal/non-ideal voltage/current sources, independent/dependent voltage current sources.
4th (18 Feb . –24 Feb.)	Unit – II Overview of Analog Circuits:	Operational Amplifiers-Ideal Op-Amp, Practical op amp, Open loop and closed loop configurations,
5th (25 Feb - 03 Mar.)	Unit – II Overview of Analog Circuits:	Application of Op-Amp as amplifier, adder, differentiator and integrator.
6th (05 Mar. – 11 Mar.)	Unit – III Overview of Digital Electronics	Introduction to Boolean Algebra, Electronic Implementation of Boolean Operations, Gates-Functional Block Approach
CLASS TEST -1		2nd week of March 2026
7th (12 Mar. –19 Mar.)	Unit– III Overview of Digital Electronics	Storage elements-Flip Flops-A Functional block approach
8th (20 Mar . –28 Mar.)	Unit– III Overview of Digital Electronics	Counters: Ripple, Up/down and decade, Introduction to digital IC Gates (of TTL Type).
9th (30 Mar. –.06 April)	Unit– IV Electric and Magnetic Circuits	EMF, Current, Potential Difference, Power and Energy; M.M.F, magnetic force, permeability, hysteresis loop, reluctance, leakage factor and BH curve

10th (07 April. – 16 April.)	**Unit– IV Electric and Magnetic Circuits**	Electromagnetic induction, Faraday's laws of electromagnetic induction, Lenz's law; Dynamically induced emf; Statically induced emf; Equations of self and mutual inductance; Analogy between electric and magnetic circuits.
CLASS TEST -2		**2nd week of April 2026**
11th (17 April. – 23 April.)	**Unit– V A.C. Circuits**	Cycle, Frequency, Periodic time, Amplitude, Angular velocity,RMS value, Average value, Form Factor Peak Factor, impedance, phase angle, and power factor; Mathematical and phasor representation of alternating emf and current;
12th (24 April -30 April)	**Unit– V A.C. Circuits**	Voltage and Current relationship in Star and Delta connections; A.C in resistors, inductors and capacitors; A.C in R-L series, R-C series,
13th (02 May-08 May.)	**Unit– V A.C. Circuits**	R-L-C series and parallel circuits; Power in A. C. Circuits, power triangle.
House Test		**2ND week of May 2026**
14th (11 May-16 May.)	**Unit– VI Transformer and Machines**	General construction and principle of core and shell type of transformers; Emf equation and transformation ratio of transformers;
15th (18 May-23 May)	**Unit– VI Transformer and Machines**	Autotransformers; Basic principle of Electromechanical energy conversion.
16th (25 May-26 May)	**Revision & Doubt Clearance**	Revision & Doubt Clearance

NOTE: Lesson Plan is Tentative, subject to availability of Time, Students & Faculty.

Thakur

Signature of Teacher
(Er. B.S.Thakur)

Signature of HOD/OIC