## CISKMV Dhand- Dadwana (Kaithal)

# lesson plan

Session-2024-25
Class-B.sc I (Non- medical)
Course- CC-1/MCC-1 (**Mechanics)**
Paper-B23-PHY-101
Date- 22 July ,2024 to 22 November , 2024
Faulty name -Ms Rachna

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| July | **unit-1** ***Fundamental of dynamics***<br>: Rigid body, Moment of Inertia, Radius of Gyration, Theorems of perpendicular and parallel axis (with proof),Moment of Inertia of ring, Disc, Angular Disc, Solid cylinder, Solid sphere. |
| August | Moment of inertia of Hollow sphere, Rectangular plate, Square plate, Solid cone,Triangular plate, Torque, Rotational Kinetic Energy, Angular momentum,Law of conservation of angular momentum, Rolling motion, condition for pure rolling, acceleration of body rolling down an inclined plane, Flywheel, Moment of Inertia of an irregular body.<br>**unit-2** ***Elasticity***<br>Deforming force, Elastic limit, stress, strain and their types,Hooke ' s law, Modulus of rigidity, Relation between shear angle and angle<br>of twist.and revision |
| September | Elastic energy stored/volume in an elastic body, Elongation<br>produced in heavy rod due to its own weight and elastic potential energy stored in it, Tension in rotating rod, Poisson ' s ratio and its limiting value,Elastic Constants and their relations. Torque required for twisting cylinder,Hollow shaft is stiffer than solid one. Bending of beam, bending moment and its magnitude, Flexural rigidity, Geometrical moment of inertia for beam of rectangular cross-section and circular cross-section. Bending of cantilever (loaded by a weight W at its free end), weight of cantilever uniformly distributed over its entire length. Dispersion of a centrally loaded beam supported at its ends, determination of elastic constants for the material of wire using Searle's method. |

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| October | **Unit-3** ***Special theory of Relativity***<br>: Michelson's Morley experiment and its outcomes, Postulates of special theory of relativity, Lorentz Transformations, Simultaneity and order of events, Lorentz contraction, Time dilation, Relativistic transformation of velocity, relativistic addition of velocities, variation of mass-energy equivalence, relativistic Doppler effect, relativistic kinematics, transformation of energy and momentum,transformation of force, Problems of relativistic dynamics. |
| November | **unit-4.** ***Gravitation and central force motion*** :<br>Law of gravitation, Potential and field due to spherical shell and solid sphere. Motion of a particle under central force field, Two body problem and its reduction to one body problem and its solution, compound pendulum or physical pendulum in form of elliptical lamina and expression of time period, determination of g by means of bar pendulum, Normal coordinates and normal modes,Normal modes of vibration for given spring mass system, possible angular frequencies of oscillation of two identical simple pendulums of length (l) and small bob of mass (m0 joined together with spring of spring constant(k) and revision. |

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| **Practicum** | 1. Measurement of length (or diameter) using Vernier Caliper, screw gauge and travelling microscope.<br>2. Moment of Inertia of a Fly Wheel.<br>3. Moment of Inertia of irregular body using a Torsion Pendulum.<br>4. Modulus of rigidity of material of wire by Maxwell's Needle.<br>5. Elastic constants by Searle's method.<br>6. To determine the value of 'g' by using Bar pendulum.<br>7. To campare moment of inertia of solid sphere,hollow sphere and solid disc of same mass with the help of Torsion pendulum. |

# CISKMV Dhand- Dadwana (Kaithal)

## lesson plan

Session-2024-25
Class-B.sc I (Non- Medical)
Course -CC-2 (**Electricity,Magnetism and electromagnetic theory)**
Paper- B23-PHY-201
Date- 01 January ,2025 to 30 April, 2025
Faulty name - Ms. Rachna

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| January | **unit-1 vector background and Electric Field** : Gradient of a scalar and its physical significance, Line, Surface and Volume integrals of a vector and their physical significance, Flux of a vector field, Divergence and curl of a vector and their physical significance, Gauss ' s divergence theorem, Stoke ' s theorem. Conservative nature of Electrostatic Field, Electrostatic Potential, Potential as line integral of field, potential difference Derivation of electric field E from potential as gradient. Derivation of Laplace and Poisson equations. Electric flux, Gauss ' s Law, Differential form of Gauss ' s law and applications of Gauss ' s law. Mechanical force of charged surface, Energy per unit volume and assignment. |
| February | **unit-2. Magnetic Field :** Biot-Savart law and its simple applications: straight wire and circular loop, Current Loop as a Magnetic Dipole and its Dipole Moment, Ampere's Circuital Law and its applications to (1) Solenoid and (2) Toroid, properties of B: curl and divergence, Magnetic Properties of Matter: Force on a dipole in an external field, Electric currents in Atoms, Electron spin and Magnetic moment, types of magnetic materials, Magnetization vector (M), Magnetic Intensity (H), Magnetic Susceptibility and permeability, Relation between B, H and M, Electronic theory of dia and paramagnetism, Domain theory of ferromagnetism (Langevin ' s theory), Cycle of Magnetization- B-H curve and hysteresis loop: Energy dissipation, Hysteresis loss and importance of Hysteresis Curve. |

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| March | **<u>unit-3</u>. Time varying electromagnetic fields:**<br>Electromagnetic inductioFaraday's laws of induction and Lenz's Law, Self-inductance, Mutual inductance, Energy stored in a Magnetic field, Derivation of Maxwell's equations, Displacement current, Maxwell's equations in differential and integral form and their physical significance.<br>**Electromagnetic Waves**: Electromagnetic waves, Transverse nature of electromagnetic wave, energy transported by electromagnetic waves, Poynting vector, Poynting ' s theorem. Propagation of Plane electromagnetic waves in free space & Dielectrics. |
| April | **<u>unit-4</u>. DC current Circuits**: Electric current and current density, Electrical conductivity and Ohm's law (Review), Kirchhoff's laws for D.C. networks, Network theorems: Thevenin ' s theorem, Norton theorem, Superposition theorem.<br><br>**Alternating Current Circuits:** A resonance circuit, Phasor, Complex Reactance and Impedance, Analysis for RL, RC and LC Circuits, Series LCR Circuit: (1) Resonance, (2) Power Dissipation (3) Quality Factor and (4) Band Width, Parallel LCR Circuit and revision. |

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| **Practicum** | 1. Determination of Impedance of an A.C. circuit and its verification.<br>2. Frequency of A.C. mains using an electromagnet.<br>3. Frequency of A.C. mains Electrical vibrator.<br>4. To study a series LCR circuit and determine its<br>(a) Resonant frequency,<br>(b) Quality factor.<br>5. To study a parallel LCR circuit and determine its<br>(a) Anti-resonant frequency and<br>(b) Quality factor.<br>6. Study of B-H curves of various materials using C.R.O, and determination of various parameters<br>7.To study inverse square law using solar cell. |

## CISKMV Dhand- Dadwana (Kaithal)

# lesson plan

Session-2024-25
Class-B.sc II (Non- medical)
Course- CC -3Thermodynamics and Statistical Physics
Paper-B23-PHY-301
Date- 22 July ,2024 to 22 November , 2024
Faulty name -Ms Rachna

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| July | **unit-1** THERMODYNAMICS-I<br>Thermodynamic-systems, variables and equation of state, thermal equilibrium, Zeroth law of thermodynamics; Concept of heat, work and its sign (work done-by the system on the system) & its path dependence, First law of thermodynamics- its significance and limitations, internal<br>energy as a state function, different types of process-isochoric process,<br>isobaric process, adiabatic process, isothermal process, cyclic process,<br>Reversible and irreversible process. |
| August | First law and cyclic process; Second law of thermodynamics and its significance, Carnot theorem; Absolute scale of temperature, Absolute Zero and magnitude of each division on work scale and perfect gas scale, Joule's free expansion, Joule Thomson effect, Joule-Thomson (Porous plug) experiment, conclusions and explanation, analytical treatment of Joule Thomson effect, Entropy, calculations of entropy of reversible and irreversible process, T-S diagram, entropy of a perfect gas, Nernst heat law (third law of thermodynamics); Liquefaction of gases, (oxygen, air, hydrogen and helium) solidification of helium below 4K, Cooling by adiabatic demagnetisation. |
| September | Unit -2. THERMODYNAMICS-II<br>Derivation of Clausius-Clapeyron and Clausius latent heat equations and their significance, specific heat of saturated vapours, phase diagram and triple point of a substance, development of Maxwell thermodynamical relations, Thermodynamical functions: Internal energy (U), Helmholtz function (F), Enthalpy (H), Gibbs function (G) and therelations between them, derivation of Maxwell thermodynamical relations from thermodynamical functions, Application of Maxwell relations: relations between two specific heats of gas, |

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| | Derivation ofClausiusClapeyron and Clausius equation, variation of intrinsic energy with volume for (i) perfect gas (ii) Vander wall gas (iii) solids and liquids, derivation of Stefan ' s law, adiabatic compression and expansion of gas & deduction of theory of Joule Thomson effect and assignment. |
| October | Unit -III. Statistical Physics-I<br>Distribution of N (for N= 2, 3, 4) distinguishable and indistinguishable particles in two boxes of equal size, microstates and macrostates, thermodynamical probability, constraints and accessible states, statistical fluctuations, general distribution of distinguishable particles in compartments of different sizes, β-parameter, entropy and probability; Concept of phase space, division of phase space into cells, postulates of statistical mechanics; Classical and quantum statistics, basic approach to these statistics, Maxwell-Boltzmann statistics applied to an ideal gas in equilibrium-energy distribution law, Maxwell's distribution of speed & velocity (derivation required), most probable speed, average and r.m.s. speed, mean energy for Maxwellian distribution. |
| November | Unit -IV. Statistical Physics-II<br>Dulong and Petit Law, derivation of Dulong and Petit law from classical physics; Need of Quantum statistics- classical versus quantum statistics, Bose-Einstein energy distribution Law, Application of B. E. Statistics to Planck's radiation law, degeneracy and B. E. condensation; Fermi-Dirac energy distribution Law, F. D. gas and degeneracy, Fermi energy and Fermi temperature; F. D. energy distribution Law for electron gas in metals, zero point energy, average speed (at 0 K) of electron gas and revision. |

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| **Practicum**<br>**(Any six)** | 1.To determine Mechanical Equivalent of Heat, J, by Callender and Barne's constant flow method.<br>2. Measurement of Planck's constant using black body radiation.<br>3. To determine Stefan's Constant.<br>4. To determine the coefficient of thermal conductivity of copper by Searle's Apparatus.<br>5. To determine the Coefficient of Thermal Conductivity of Cu by Angstrom's Method.<br>6. To determine the coefficient of thermal conductivity of a bad conductor by Lee and Charlton's disc method.<br>7. To determine the temperature co-efficient of resistance by Platinum resistance thermometer.<br>8. To study the variation of thermo emf across two junctions of a thermocouple with temperature.<br>9. To record and analyze the cooling temperature of an hot object as a function of time using a thermocouple and suitable data acquisition system<br>10. To calibrate Resistance Temperature Device (RTD) using Null Method/Off-Balance Bridge<br>11. To prove the law of probability by using one coin, two coins and 10 or more coins.<br>12. To determine the coefficient of increase of volume of air at constant pressure.<br>13. To determine the coefficient of increase of pressure of air at constant volume.<br>14. Computer simulation of Maxwell-Boltzmann distribution, FermiDirac & Bose-Einstein<br>15. Study of statistical distribution from the given data and to find most probable, average, and rms value<br>16. Mechanical Equivalent of heat (J) by Joule's calorimeter.<br>17. Heating efficiency of electrical kettle with varying voltage.<br>- |

# CISKMV Dhand- Dadwana (Kaithal)

## lesson plan

Session-2024-25
Class-B.sc II (Non- Medical)
Course- CC-4 **(Wave and optics )**
Paper-B23-PHY-401
Date- 1 January ,2025 to 30 April, 2025
Faulty name -Ms. Rachna

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| January | Unit-1. INTERFERENCE<br>Interference by Division of Wave front: Young's double slit experiment, Coherence, Conditions of interference, Fresnel's biprism and its applications to determine the wavelength of sodium light and thickness of a mica sheet, phase change on reflection.<br>Interference by Division of Amplitude: Plane parallel thin film, production of colors in thin films, classification of fringes in films, Interference due to transmitted light and reflected light, wedge shaped film, Newton's ring. |
| February | Unit II. DIFFRACTION<br>Fresnel's diffraction: Huygens-Fresnel's theory, Fresnel's assumptions, rectilinear propagation of light, diffraction at a straight edge, rectangular slit and diffraction at a circular aperature. Diffraction due to a narrow slit, diffraction due to a narrow wire.<br>Fraunhoffer diffraction: Single slit diffraction, double slit diffraction, plane transmission grating spectrum, dispersive power of grating, limit of resolution, Rayleigh's criterion, resolving power of telescope and a grating |
| March | unit III. POLARIZATION<br>Polarization: Polarisation by reflection, refraction and scattering, Malus Law, Phenomenon of double refraction, Huygens's wave theory of double refraction (Normal and oblique incidence), Analysis of polarized Light. Nicol prism, Quarter wave plate and half wave plate, production and detection of (i) Plane polarized light (ii) Circularly polarized light and (iii) Elliptically polarized light. Optical activity, Fresnel's theory of optical rotation, Specific rotation, Polarimeters (half shade and Biquartz) |

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| April | unit IV. Lasers:<br>Basic concept of absorption and emission of radiations, amplification and population inversion; Main components of lasers: (i) Active Medium (ii) Pumping (iii) Optical Resonator; Properties of laser beam: Monochromaticity, Directionality, Intensity, Coherence (Spatial & Temporal coherence); Metastable state, Excitation mechanism and Types of Lasers (He-Ne Laser & Ruby Laser), Applications of Lasers<br>Fibre optics: Optical fibres and their properties, Principal of light propagation through a optical fibre, Acceptance angle and numerical aperture, Types of optical fibles: Single mode and multimode fibres, Advantages and Disadvantages of optical fibres, Applications of optical fibres, Fibre optic sensors: Fibre Bragg Grating |

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| **Practicum** | 1 To determine Refractive index of the material of a prism using sodium source.<br>2 Determination of wave length of sodium light using Newton's Rings.<br>3.To draw a graph between wave length and minimum deviation for various lines from a Mercury discharge source.<br>4. Determination of wavelength of sodium light by using a diffraction grating.<br>5. Resolving power of a telescope.<br>6.Resolving power of a prism.<br>7.Resolving power of a grating . |

# CISKMV Dhand- Dadwana (Kaithal)

## lesson plan

Session-2024-25
Class-B.sc III (Non- Medical)
Subject -Physics
Paper- PH - 501 (Quantum and laser Physics )
Date- 22 July ,2024 to 22 November , 2024
Faulty name -Ms Rachna

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| July | ***Unit I: Origin quantum physics (Experimental basis)***<br>Overview, scale of quantum physics, boundary between classical and quantum phenomena, Photon, Photoelectric effect, Compton effect (theory and result), FrankHertz experiment, de-Broglie hypothesis. Davisson and Germer experiment, · G.P. Thomson experiment. Phase velocity, group velocity and their relation. |
| August | Heisenberg's uncertainty principle. Time energy and angular momentum, position uncertainty. Uncertainty principle from de Broglie wave. (Wave-particle duality). Gamma Ray Microscope, Electron diffraction from a slit. Derivation of 1-D time-dependent Schrodinger wave equation (subject to force, free particle)Derivation of 1-D time-dependent Schrodinger wave equation (subject to force, free particle). Time-independent Schrodinger wave equation, eigen values, eigen functions, wave functions and its significance. Orthogonality and Normalization of function, concept of observer and operator. Expectation values of dynamical quantities, probability current density and assignment. |

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| September | ***Unit II: Application of Schrodinger wave equation:***<br>(i) Free particle in one-dimensional box (solution of Schrodinger wave equation, eigen functions, eigen values, quantization of energy and momentum, nodes and anti nodes, zero point energy).<br>(ii) One dimensional step potential E > Vo (Reflection and Transmission coefficient).<br>iii) One dimensional step potential E < Vo (penetration depth calculation).<br>(iv) One dimensional potential barrier, E > Vo (Reflection and Transmission<br>coefficient)<br>(v) One-dimensional potential barrier, E < Vo (penetration or tunneling coefficient).<br>(vi) Solution of Schrodinger equation for harmonic oscillator (quantization of energy, Zero-point energy, wave equation for ground state and excited states) |
| October | ***Unit III: Laser Physics –I***<br>Absorption and emission of radiation, Main features of a laser: Directionality, high intensity, high degree of coherence, spatial and temporal coherence, Einstein's coefficients and possibility of amplification, momentum transfer,life time of a level, kinetics of optical absorption ((two and three level rate equation, Fuchbauer landerburg formula). Population inversion: A necessary condition for light amplification, resonance cavity, laser pumping, Threshold condition for laser emission, line broadening mechanism, homogeneous and inhomogeneous line broadening (natural, collision and Doppler broadening). |
| November | ***Unit IV: Laser Physics – II***<br>He-Ne laser and RUBY laser (Principle, Construction and working), Optical properties of semiconductor, Semiconductor laser (Principle, Construction and working), Applications of lasers in the field of medicine and industry. and revision. |

# CISKMV Dhand- Dadwana (Kaithal)

## lesson plan

Session-2024 -25
Class-B.sc III (Non- Medical)
Subject -Physics
Paper- PH - 502 (Nuclear Physics )
Date- 22 July ,2024 to 22 November , 2024
Faulty name -Ms Rachna

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| July | **Unit I:** *Nuclear Structure and Properties of Nuclei*<br>Nuclear composition (p-e and p-n hypotheses), Nuclear properties; Nuclear size, spin, parity, statistics, magnetic dipole moment, quadruple moment (shape concept). |
| August | Determination of mass by Bain-Bridge, Bain-Bridge and Jordan mass spectrograph. Determination of charge by Mosley Law. Determination of size of nuclei by Rutherford Back Scattering. mass and binding energy, systematic of nuclear binding energy, nuclear stability and revision. |
| September | **Unit II:** *Nuclear Radiation decay Processes*<br>Alpha-disintegration and its theory. Energetics of alpha-decay, Origin of continuous beta spectrum (neutrino hypothesis), types of beta-decay and energetics of beta-decay. Nature of gamma rays, Energetics of gamma rays. And assignment. |
| October | Radiation interaction<br>Interaction of heavy charged particles (Alpha particles); Energy loss of heavy charged particle (idea of Bethe formula, no derivation), Range and straggling of alpha particles. Geiger-Nuttal law. Interaction of light charged particle (Beta-particle), Energy loss of beta-particles (ionization), Range of electrons, absorption of beta-particles. Interaction of Gamma Ray; Passage of Gamma radiations through matter (Photoelectric, Compton and pair production effect) electron-positron annihilation. Absorption of Gamma rays (Mass attenuation coefficient) and its application<br>.**Unit III:**<br>Nuclear Accelerators: Linear accelerator, Tendem accelerator, Cyclotron and Betatron accelerators. |

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| November | Gas filled counters; Ionization chamber, proportional counter, G.M. Counter (detailed study), Scintillation counter and semiconductor detector.<br>**Unit IV**:<br>Nuclear reactions, Elastic scattering, Inelastic scattering, Nuclear disintegration, Photonuclear reaction, Radiative capture, Direct reaction, Heavy ion reactions and spallation Reactions. Conservation laws, Q-value and reaction threshold. Nuclear Reactors, General aspects of Reactor Design. Nuclear fission and fusion reactors,<br>(Principle, construction, working and use). |

## CISKMV Dhand- Dadwana (Kaithal)

## lesson plan

Session-2024-25
Class-B.sc III (Non- Medical)
Subject -Physics
Paper- PH - 601 (Solid state and Nano physics )
Date- 01 January ,2025 to 30April, 2025
Faulty name -Ms Rachna

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| January | Unit-1:<br>crystalline and glassy forms,liquid crystals,crystal structure,periodicity,lattice and basis,crystal translation vectors and axes,unit cell and primitive cell,Winger Switzerland primitive cell,symmetry operations for a two dimensional crystal,Bravia's lattices in 2D&3D ,crystal planes and Miller indices,interplaner spacing,crystal structure of ZnS,NaCl,Diamond and revision. |
| February | unit-2:<br>X-ray diffraction,Bragg's law and experimental X-ray diffraction methods: Laue's method,rotating crystal method,powder method,K-space and reciprocal lattice and its physical significance,reciprocal lattice vectors,reciprocal lattice of SCC,BCC,FCC and assignment on crystal structure. |

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| March | unit-3 (Superconductivity)<br>:Introduction and survey of superconductivity,HTS, isotopic effect ,critical magnetic field,Meissen effect ,London theory and Pippard's equation ,classification of superconductor,BCS theory of superconductivity,flux quantisation,Josephson effect (AC and DC),practical application of superconductivity and their limitations, And revision. |
| April | unit-4 : Nano physics<br>definition , length scale of nano physics,importance of nano scale and technology,benefits and challenges in molecular manufacturing,molecular assembler concept, understanding advanced capabilities: SEM,TEM,FIM,STEM,STM,AFM, carbon fullerenes and nanotubes ,revision and seminars. |

## CISKMV Dhand- Dadwana (Kaithal)

## lesson plan

Session-2024-25
Class-B.sc III (Non- Medical)
Subject -Physics
Paper- PH - 602 (Atomic and Molecular physics )
Date- 01 January ,2025 to 30 April, 2025
Faulty name -Ms .Rachna

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| January | Unit – I: *Historical background of atomic spectroscopy*<br>Introduction of early observations, emission and absorption spectra, atomic spectra, wave number, spectrum of Hydrogen atom in Balmer series, Bohr atomic model (Bohr ' s postulates) , spectra of Hydrogen rogen atom , explanation of spectral series in Hydrogen atom, un-quantized states and continuous spectra, spectral series in absorption spectra, effect of nuclear motion on line spectra (correction of finite nuclear mass), variation in Rydberg constant due to finite mass, short comings of Bohr's theory, Wilson sommerfeld quantization rule, de-Broglieinterpretation Bohr quantization law,and assignment. |
| February | Bohr's corresponding principle, Sommerfeld's extension of Bohr's model, Sommerfeld relativistic correction, Short comings of Bohr-Sommerfeld theory, Vector model; space quantization, electron spin, coupling of orbital and spin angular momentum, spectroscopic terms and their notation, quantum numbers associated with vector atom model, transition probability and selection rules.<br>Unit –II: *Vector Atom Model (single valance electron)*<br>Orbital magnetic dipole moment (Bohr megnaton), behavior of magnetic dipole in external magnetic filed; Larmor's precession and theorem. Penetrating and |

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| | Non-penetrating orbits, Penetrating orbits on the classical model;Quantum defect, spin orbit interaction energy of the single valance electron, spin orbit interaction for penetrating and non-penetrating orbits. |
| March | quantum mechanical relativity correction, Hydrogen fine spectra, Main features of Alkali Spectra and their theoretical interpretation, term series and limits, Rydeburg-Ritze combination principle, Absorption spectra of Alkali atoms. observed doublet fine structure in the spectra of alkali metals and its Interpretation, Intensity rules for doublets, comparison of Alkali spectra and Hydrogen spectrum .<br>UNIT-III: *Vector Atom model (two valance electrons)*<br>Essential features of spectra of Alkaline-earth elements, Vector model for two valance electron atom: application of spectra.<br>Coupling Schemes:LS Coupling Scheme and JJ coupling scheme, Interaction energy in L-S coupling (sp, pd configuration), Lande interval rule, Pauli principal and periodic classification of the elements. Interaction energy in JJ Coupling (sp, pd configuration), equivalent and non-equivalent electrons, Two valance electron system-spectral terms of non-equivalent and equivalent electrons, comparison of spectral terms in L-S And J-J coupling. Hyperfine structure of spectral lines and its origin; isotope effect, nuclear spin and seminar. |
| April | Unit –IV: *Atom in External Field*<br>Zeeman Effect (normal and Anomalous),Experimental set-up for studying Zeeman effect, Explanation of normal Zeeman effect(classical and quantum mechanical), Explanation of anomalous Zeeman effect(Lande g-factor), Zeeman pattern of D1 and D2 lines of Naatom, Paschen-Back effect of a single valence electron system. Weak field Stark effect of Hydrogen atom.<br>**Molecular Physics:** General Considerations, Electronic States of Diatomic Molecules, Rotational Spectra (Far IR and Microwave Region), Vibrational Spectra (IR Region), Rotator Model of Diatomic Molecule, Raman Effect, Electronic Spectra. And revision . |

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| **Practical** | 1.Study the C B transistor amplifier<br>2. Study the C E transistor amplifier<br>3. Numerical integration by Simpson 1/3 rule<br>4.Fitting of a straight line using Least-Square method<br>5. Using array variable, find out the average and standard deviation<br>6.With the help of a program arrange the marks in ascending of descending order<br>7.Determine the λNa by Fresnel Byprism<br>8 Study double slit interference by He-Ne laser |

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| | 9 Determine the diameter of a wire using (He-Ne Laser) diffraction method<br>10 Determine the Young modulus 'Y' by Searl's interference method<br>11 Determine the resolving power of a prism<br>12 Thickness of a paper using interference fringes in an air wedge<br>13 Determine the resolving power of a transmission grating |