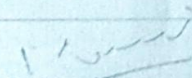


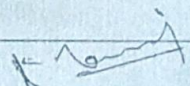
Lesson Plan For B. Sc 1st Year (Physics)
Session - 2021-2022 (April to June 2022)

April 2022	First week	Introduction of Elasticity, Hooke's law, Study of Elastic Constants and their relations, Poisson's ratio, Torsion of cylinder and Twisting couple, Bending of beam
	Second week	Cantilevers, Applications of Centrally loaded beam Assumption of kinetic theory of gases, Law of equipartition of energy and its applications for specific H of gases
	Third week	Maxwell distribution of speeds and velocities, most probable speed, average and R.M.S. speed, mean free path and transport of energy and momentum and diffusion of gases
	Fourth week	Brownian motion, introduction of real gas equation and van der waal's and find out the critical volume, pressure and temperature revision of unit first (properties of matter) Electromagnetic induction; growth and Decay of current in a circuit with (a) Capacitance and resistance (b) Resistance and Inductance (c) Capacitance and Inductance
May 2022	First week	(d) Capacitance, Resistance and Inductance AC circuit analysis using complex variables with (a) Capacitance and resistance (b) Resistance and Inductance (c) Capacitance and Inductance
	Second week	(d) Capacitance, Resistance and Inductance, Series and parallel resonant circuit, Sharpness of resonance Semiconductor diodes: energy bands in solids, Intrinsic and extrinsic semiconductor, hall effect, P-N Junction diode and their V-I Characteristics, Zener and Avalanche breakdown
	Third week	Zener diode and voltage regulator, Light emitting diodes, Photo diode, Solar cell, photo conduction in semiconductors, Rectifier- half wave and full wave rectifier and bridge rectifier, filter circuits in rectifier, Regulated power supply
	Fourth week	Working of PNP and NPN transistors, various configuration of transistors and input and output characteristics, principle, construction and working of C.R.O.
June 2022	First week	transistor amplifier (C.B, C.E.), D.C. Load line, R-C coupled amplifier, advantage of negative feedback emitter follower.
	Second week	Oscillators, principle of oscillation, conditions for self-sustained oscillations: barkhausen criterion for oscillations, tuned collector, common emitter oscillator, Hartley and colpitt's oscillator
	Third week	Revision
	Fourth week	Revision


 Dr. Manoj Kumar
 Department of Physics
 GCG, Manesar

Lesson Plan For B. Sc ^{II}nd Year (Physics)
Session - 2021-2022 (April to June 2022)

April 2022	First week	Statistical Physics, Probability, Distribution of $N (= 2, 3, 4, \dots)$ Particles in two (equal) box of equal size.
	Second week	Microstates and Macrostates of a system of Particles, Thermodynamic Probability, Constrained Accessible state
	Third week	Stirling's Approximation, Most Probable Distribution & Statistical Fluctuations.
	Fourth week	Inverse Probability, Phase Space, Static & dynamic systems. Unit-II nd Postulates of Statistical Physics, size of phase space cell, occupation index.
May 2022	First week	No. of phase space cell in momentum interval $P \rightarrow P + \Delta P$, β -Parameter, Boltzmann's entropy relation
	Second week	Boltzmann's distribution law, Classical / Quantum statistics, Bose-Einstein statistics, Black body Radiation.
	Third week	Application of B.E. statistics, Bose-Einstein Gas.
	Fourth week	Degeneracy & Bose-Einstein Condensation, Fermi Dirac statistics
June 2022	First week	Continuum limit, Fermi - Dirac Gas & Fermi energy, Degeneracy of Fermi Gas.
	Second week	Electron Gas in Metals, Specific heat Anomaly of Metals & its
	Third week	Solution. Comparison of m.g., B.E., F-D statistics
	Fourth week	Revision


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 GCG, Manesar

Lesson Plan For B.Sc 6th Semester (Physics)
Session - 2021-2022 (April to June 2022)

Month	Week	Unit
April 2022	First week	Unit 1: Nuclear Structure and Properties of Nuclei
	Second & Third week	Unit 2: Interaction of Nuclear Physics
	Fourth week	Unit 3: Nuclear Reactions and nuclear Reactors
May 2022	First & Second week	Unit 3: Nuclear Accelerators and Nuclear Radiation Detectors
	Second & Third week	Unit 1: Spectroscopy of Atoms and metals, Vector Atom Model
	Fourth week	Unit 2: Zeeman Effect, Paschen-back Effect and Stark Effect and Molecular Physics
June 2022	First & Second week	Unit 3: Main Features of laser and application
	Third & Fourth week	Revision and Test

Pushpa Kumari

Dr. Pushpa
Department of Physics
GCG, Manesar

Lesson Plan For B.Sc 6th Semester (Physics)
Session - 2021-2022 (April to June 2022)

April	First to Fourth week	Unit 1: Interference by division of Amplitude and Fresnel's Diffraction
May 2022	First to Third week	Unit 2: Fraunhofer Diffraction
	Fourth week	Unit 3: Polarization
June 2022	First & Second week	Unit 3: Polarization
	Third & Fourth week	Revision and Test

Pushpa Kumari

Dr. Pushpa
Department of Physics
GCG, Manesar