

Lesson Plan (2021-22)

Name of the Assistant: Sapna

Class and Section: B.Sc. Indya (Sec-A) SEM-4

Subject: Statistical Physics and Optics II

Week	Date	Topics
	21/3/22	Perceability
	22/3/22	Some Perceability Consideration
	24/3/22	Combinations Processing max. perceability
	25/3/22	Combinations Processing min. perceability
	26/3/22	Distribution of molecules in 2 boxes.
	28/3/22	Case with weightage
	29/3/22	Phase Space
	20/3/22	microstates and macrostates
	21/3/22	Statistical fluctuations
	01/4/22	Constraints
	02/4/22	accessible & non-accessible states
	04/4/22	Thermodynamic Perceability
	05/4/22	Numericals
	06/4/22	Problems
	07/4/22	Interference by division of amplitude
	08/04/22	Newton's Ring interference
	09/04/22	Mirchelson's interferometer
	11/4/22	Fresnel's Diffraction
	12/4/22	Fresnel's half period zones
	13/4/22	Zone plate.
	15/4/22	Diffraction at a straight edge
	16/4/22	Rectangular slit
	18/4/22	Circular aperture
	19/4/22	Numericals
	20/4/22	Problems
	21/4/22	Unit - 1 test paper - 1
	22/4/22	Review unit - 1 paper - 2
	23/4/22	Discussion unit 1 both papers
	25/4/22	Postulates of statistical physics
	26/4/22	Division of phase space into cells
	27/4/22	Conditions of thermal eq ^m
	28/4/22	b - parameter
	29/4/22	Entropy and Perceability
	30/4/22	Boltzmann's Distribution here
	2/5/22	Calculation of a and b
	3/5/22	Bose - Einstein's Statistics
	4/5/22	Application of B.E to Planck's law
	5/5/22	P.E. Gas
	6/5/22	Numericals
		Numericals

Lesson Plan (2021-22)

Name of the Assistant: Sapna
 Class and Section: B.Sc Indya (Sec-N)
 Subject:

Week	Date	Topics
	7-5-22	Frounhofer diffraction
	9-5-22	One slit Diffraction
	10-5-22	Two slit Diffraction, N-Slit
	11-5-22	Grating Spectra
	12-5-22	Dispersive Power of Grating
	13-5-22	Rayleigh's Criterion
	14-5-22	Resolving Power of telescope and
	16-5-22	Limit of resolution
	17-5-22	Numericals
	18-5-22	Fermi-Dirac Statistics
	19-5-22	U.B Law in limiting case of B.E
	20-5-22	Condensation in Gas
	21-5-22	Electron Gas in metals
	23-5-22	Fermi point energy
	24-5-22	Specific heat of metals and solution
	25-5-22	Numericals
	26-5-22	Numericals
	27-5-22	Polarization
	28-5-22	Polarization and double refraction
	30-5-22	Polarization by scattering
	31-5-22	Malus's Law
	1-6-22	Phenomenon of Double refraction
	2-6-22	Unit-2 paper-1 test
	3-6-22	Huygen's theory of Double refraction
	4-6-22	Analysis of Polarized light
	6-6-22	Nicol prism
	7-6-22	Quarter wave plate
	8-6-22	Half wave plate
	9-6-22	Plane polarized light
	10-6-22	Circularly Polarized light
	11-6-22	elliptically polarized light
	12-6-22	Optical activity
	14-6-22	Fresnel's theory of rotation
	15-6-22	Specific rotation
	16-6-22	Polarimeter (half shade and Biquartz)
	17-6-22	Numericals
	18-6-22	Numericals
	20-6-22	Unit-2 paper-2 test
	21-6-22	Rotation
	22-6-22	Rotation

Lesson Plan (2021-22)

Name of the Assistant: Sapna

Class and Section: Atomic molecules

Subject: R.S. Dindiyar (Sec-A)

SEM-5

Lesson and nuclear physics

Week	Date	Topics
	21-03-2022	Vector atom model
	22-03-2022	Quantum Numbers
	24-03-2022	Penetrating and Non-penetrating Orbitals
	25-03-2022	Penetrating and Non-penetrating Orbitals
	26-03-2022	Spectral lines in different series of alkali Structure
	28-03-2022	Spin orbit interaction
	29-03-2022	Doublet terms separation LS
	30-03-2022	Russel-Saunders Coupling
	31-03-2022	jj coupling
	01-04-22	LS and jj coupling
	02-04-22	Problems
	04-04-22	Problems
	05-04-22	Nuclear mass
	06-04-22	Binding energy
	07-04-22	Systematics nuclear binding energy
	8/4/22	Nuclear Stability
	9/4/22	Nuclear Size, Spin, Parity
	11/4/22	Statistics, magnetic dipole moment
	12/4/22	Quadrupole moment
	13/4/22	Determination of mass by Ross-Bridge
	14/4/22	London mass spectrometry
	15/4/22	Moseley law
	16/4/22	Rutherford back scattering
	18/4/22	Problems
	19/4/22	Problems
	20/4/22	Zeeman effect
	21/4/22	D_1 and D_2 lines of $ns-stom$
	22/4/22	Paschen Back effect
	23/4/22	Weak field Stark effect
	25/4/22	Weak field Stark effect
	26/4/22	Discrete set of electronic energies of molecules
	27/4/22	Quantisation of vibrational
	28/4/22	Quantisation of rotational energies
	29/4/22	Stark's Lines
	30/4/22	Anti-Stokes lines
	2/5/22	Numericals
	3/5/22	Numericals
	4/5/22	Unit test - 1, Paper-1
	5/5/22	Problems
	6/5/22	Problems

Lesson Plan (2021-22)

Name of the Assistant: Sapna
 Class and Section: B.Sc. IInd Yr. (Sci-A)
 Subject: Atomic molecular laser and nuclear physics

Week	Date	Topics
	7-5-22	Alpha particle theory
	9-5-22	Energy loss of heavy charged particles
	10-5-22	multiple ionization
	11-5-22	Range and straggling
	12-5-22	Geiger Natta Law
	13-5-22	Beta particle
	14-5-22	Neutrino hypothesis
	16-5-22	energetics of beta decay
	17-5-22	energy loss of β particles
	18-5-22	Range of electrons
	19-5-22	absorption of beta particles
	20-5-22	interaction of Gamma Ray
	21-5-22	Nature of Gamma Rays
	23-5-22	Annihilation
	24-5-22	Mass attenuation effects
	25-5-22	Problems
	26-5-22	Laser features
	27-5-22	Spatial and temporal coherence
	28-5-22	Einstein's Coefficients
	30-05-22	Kinetics of optical absorption
	31-5-22	Threshold condition
	1-6-22	Laser pumping
	2-6-22	He-Ne Laser, Ruby Laser
	3-6-22	Application of Lasers
	4-6-22	Problems
	6-6-22	unit-1 paper-2 test
	7-6-22	Nuclear Reaction
	8-6-22	Elastic scattering and inelastic scattering
	9-6-22	Direct Reactions
	10-6-22	Conversion Lens
	11-6-22	Nuclear Reactors
	13-6-22	Fission and fusion Reactors
	14-6-22	Linear Accelerator
	15-6-22	Tandem Accelerator
	16-6-22	Cyclotron Betatron accelerators
	17-6-22	Ionization chamber
	18-6-22	Proportional Counter
	20-6-22	GM Counter
	21-6-22	Scintillation Counter
	22-6-22	Semiconductor Detectors

Lesson Plan (2021-22)

Name of the Assistant Professor: Anil Kumar
 Class and Section: B.Sc. IIIrd Year (Sec-B) SEM-4
 Subject: Statistical Physics and Optics-II

Week	Date	Topics
	21/03/22	Probability
	22/3/22	Some Probability Consideration
	24/3/22	Combinations Possessing Max. Probability
	25/3/22	Combinations Possessing Min. Probability
	26/3/22	Distribution of Molecules in 2 boxes.
	28/3/22	Case with Weightage
	29/3/22	Phase space
	30/3/22	Macrostate and microstates
	31/3/22	Statistical fluctuation
	01/04/22	Constraints
	02/4/22	accessible & Non-accessible states
	04/4/22	Thermodynamic Probability
	05/4/22	Numericals
	06/4/22	Problems
	07/4/22	Interference by division of amplitude
	08/4/22	Newton's Ring Interferometer
	09/4/22	Michelson's Interferometer
	11/4/22	Fresnel's Diffraction
	12/4/22	Fresnel's Half period zones
	13/4/22	Zone plate
	15/4/22	Diffraction at a straight edge
	16/4/22	Rectangular slit
	18/4/22	Circular aperture
	19/4/22	Numericals
	20/4/22	Problems
	21/4/22	Unit - I Test paper - I
	22/4/22	Revise unit - I Paper - II
	23/4/22	Discussion unit - I both papers
	25/4/22	Postulates of Statistical physics
	26/4/22	Division of phase space into cells
	27/4/22	Condition of thermal eq ⁿ .
	28/4/22	β - parameter
	29/4/22	Entropy and probability
	30/4/22	Boltzmann's Distribution law
	2/5/22	Calculation of A and B
	3/5/22	Bose - Einstein's Statistics
	4/5/22	Application of B.E. to Planck's law
	5/5/22	B.E. Gas
	6/5/22	Numericals

Lesson Plan (2021-22)

Name of the Assistant Professor :- Anil Kumar
 Class and Section: B.Sc. IInd Year (Sec-B)
 Subject: Statistical Physics and Optics-II

Week	Date	Topics
	07/05/22	Fraunhofer diffraction
	9/5/22	One slit Diffraction
	10/5/22	Two slit Diffraction, N-slit
	11/5/22	Grating Spectrum
	12/5/22	Dispersive power of Grating
	13/5/22	Rayleigh's criterion
	14/5/22	Resolving power of Telescope
	16/5/22	Limit of resolution
	17/5/22	Numericals
	18/5/22	Fermi-Dirac Statistics
	19/5/22	M.B. Law as limiting case of B.E.
	20/5/22	Condensation F.D. Gas
	21/5/22	Electron gas in metals
	23/5/22	Fermi point energy
	24/5/22	Specific heat of metals and solutions
	25/5/22	Numericals
	26/5/22	Numericals
	27/5/22	Polarization
	28/5/22	Polarization and double refraction
	30/5/22	Polarization by Scattering
	31/5/22	Malus's law
	1/6/22	Phenomenon of Double refraction
	2/6/22	Unit-2 paper-I test
	3/6/22	Hugen's theory of Double refraction
	4/6/22	Analysis of Polarized light
	6/6/22	Nicol prism
	7/6/22	Quarter wave plate
	8/6/22	Half wave plate
	9/6/22	plane polarized light
	10/6/22	Circularly polarized light
	11/6/22	elliptically polarized light
	13/6/22	optical activity
	14/6/22	Fresnel's theory of rotation
	15/6/22	Specific rotation
	16/6/22	Polarimeter (Half Shade and Biquartz)
	17/6/22	Numericals
	18/6/22	Numericals
	20/6/22	Unit-2 paper-2 Test
	21/6/22	Revision
	22/6/22	Revision

Lesson Plan (2021-22)

Name of the Assistant Professor: - Anil Kumar
 Class and Section: B.Sc. 3rd Year (Sec-B) SEM-6
 Subject: Atomic molecular laser and Nuclear Physics

Week	Date	Topics
	21/3/2022	Vector atom model
	22/3/22	Quantum Numbers
	24/3/22	Penetrating and Non-penetrating orbits
	25/3/22	Penetrating and Non-penetrating orbits
	26/3/22	Spectral lines in diff. shell of alkali structure
	28/3/22	Spin-Orbit Interaction
	29/3/22	Doublet term separation LS
	30/3/22	Russel - Saunders Coupling
	31/3/22	Jj Coupling
	01/4/22	LS and JJ Coupling
	2/4/22	Problems
	4/4/22	Problems
	5/4/22	Nuclear Mass
	6/4/22	Binding Energy
	7/4/22	Systematics nuclear binding energy
	8/4/22	Nuclear Stability
	9/4/22	Nuclear Size, Spin, parity
	11/4/22	Statistics, magnetic dipole moment
	12/4/22	Quadrupole Moment
	13/4/22	Determination of mass by Bain-Bridge
	14/4/22	Jordan mass spectrograph
	15/4/22	- Mosley law
	16/4/22	Rutherford back scattering
	18/4/22	Problems
	19/4/22	Problems
	20/4/22	Zeeman effect
	21/4/22	D ₁ and D ₂ lines of Na-atom
	22/4/22	Paschen Back effect
	23/4/22	Weak field Stark effect
	25/4/22	Weak field Stark effect
	26/4/22	Discrete set of electronic energies of molecules.
	27/4/22	Quantisation of vibrational
	28/4/22	Quantisation of rotational energies
	29/4/22	Stoke's Lines
	30/4/22	Anti Stoke's Lines
	2/5/22	Numericals
	3/5/22	- Numericals
	4/5/22	Unit test-1, Paper-1
	5/5/22	Problems
	6/5/22	a...

Lesson Plan (2021-22)

Name of the Assistant Professor: Anil Kumar
 Class and Section: B. Sc. IIIrd year (Sec-B)
 Subject: Atomic, molecular laser and Nuclear Physics

Week	Date	Topics
	7/5/22	Alpha particle theory
	9/5/22	Energy loss of heavy charged particle
	10/5/22	Quadrupole moment
	11/5/22	Range and straggling
	12/5/22	Geiger-Muttel law
	13/5/22	Beta particle
	14/5/22	Neutrino hypothesis
	16/5/22	energies of beta decay
	17/5/22	Energy loss of β -particles
	18/5/22	Range of electrons
	19/5/22	Absorption of beta particles
	20/5/22	Interaction of Gamma ray
	21/5/22	Nature of Gamma rays
	23/5/22	Annihilation
	24/5/22	Mass attenuation effect
	25/5/22	Problems
	26/5/22	Laser features
	27/5/22	Spatial and temporal coherence
	28/5/22	Einstein Coefficients
	30/5/22	Kinetic of optical absorption
	31/5/22	Threshold Condition
	01/6/22	Laser pumping
	02/6/22	He-Ne laser Ruby laser
	3/6/22	Application of Laser
	4/6/22	Problems
	6/6/22	Unit-1 paper-2 Test
	7/6/22	Nuclear Reaction
	8/6/22	Elastic Scattering and Inelastic scattering
	9/6/22	Direct Reactions
	10/6/22	Conservation Laws
	11/6/22	Nuclear Reactors
	13/6/22	fission and fusion Reactors
	14/6/22	Linear Accelerators
	15/6/22	Tandem Accelerator
	16/6/22	Cyclotron Betatron accelerators
	17/6/22	Ionization Chamber
	18/6/22	Proportional Counter
	20/6/22	G.M. Counter
	21/6/22	Scintillation Counter
	22/6/22	Semiconductor detector

Lesson Plan (2021-22)

Name of the Assistant: professor - Pooja
 Class and Section: Bosc Ist (II sem) sec-2-A
 Subject: mechanics and electronic devices

Week	Date	Topics
	21-3-2022	Elasticity, Hooke's law.
	22-3-2022	Elastic constants and their relation.
	24-3-2022	Poisson's ratio
	25-3-2022	torsion of cylinder and twisting couple.
	26-3-2022	Bending of beam cantilevers.
	28-3-2022	Centrally loaded beam
	29-3-2022	Assumptions of kinetic theory of gases
	30-3-2022	Law of equipartition of energy
	31-3-2022	its application for specific heats of gases
	1-4-2022	maxwell distribution of speeds, velocities.
	2-4-2022	Experimental verification of maxwell law of speed
	4-4-2022	most probable speed
	5-4-2022	average and r.m.s speed
	6-4-2022	mean free path
	7-4-2022	Transport of energy and momentum
	8-4-2022	diffusion of gases
	9-4-2022	Brownian Motion
	11-4-2022	Real gases
	12-4-2022	Vander waal's equation
	13-4-2022	Reference systems
	14-4-2022	Inertial frames
	15-4-2022	Galilean invariance.
	16-4-2022	Conservation laws
	18-4-2022	Newtonian relativity principle.
	19-4-2022	Michelson-Morley Experiment
	20-4-2022	Search for ether, Lorentz transformation.
	21-4-2022	Time dilation
	22-4-2022	velocity addition theorem.
	23-4-2022	variation of mass with velocity.
	25-4-2022	mass energy equivalence.
	26-4-2022	Growth and decay of current in a circuit
	27-4-2022	Capacitance and resistance
	28-4-2022	resistance and Inductance
	29-4-2022	Capacitance and Inductance.
	30-4-2022	capacitance resistance and Inductance
	2-5-2022	AC circuit analysis using complex variables
	3-5-2022	series and parallel resonant circuit.
	4-5-2022	quality factor, resonance
	5-5-2022	Energy bands in solids.
	6-5-2022	Intrinsic and extrinsic

Lesson Plan (2021-22)

Name of the Assistant: Pooja
 Class and Section:
 Subject:

Week	Date	Topics
	7-5-2022	Semiconductor
	9-5-2022	Hall-effect
	10-5-2022	P-Ni-Junction diode and V-I characteristics
	11-5-2022	Zener and avalanche breakdown
	12-5-2022	Resistance of a diode
	13-5-2022	Light emitting diode
	14-5-2022	Photo conduction in Semiconductors
	16-5-2022	Photodiode, solar cell
	17-5-2022	Half wave and full wave rectifier
	18-5-2022	Zener diode as voltage regulator
	19-5-2022	Simple regulated power supply
	20-5-2022	Junction Transistors Bipolar transistors
	21-5-2022	Working of NPN and PNP transistor
	23-5-2022	Transistor connection (C-B, C-E, C-C)
	24-5-2022	Constants of transistor
	25-5-2022	Transistor characteristic curves
	26-5-2022	Advantage of C-B configuration (C-B)
	27-5-2022	Transistor biasing
	28-5-2022	Method of Transistor biasing and stabilization
	30-5-2022	D.C. load line
	31-5-2022	C-B, C-E transistor biasing
	1-6-2022	Common-base emitter amplifiers
	2-6-2022	Classification of amplifiers
	3-6-2022	R-C coupled amplifiers
	4-6-2022	feed-back in amplifiers
	6-6-2022	advantage of negative feedback emitter follower
	7-6-2022	Principle of oscillation
	8-6-2022	Classification of oscillator
	9-6-2022	Condition for self sustained oscillation
	10-6-2022	Barkhausen criterion for oscillation
	11-6-2022	Tuned collector common emitter oscillator
	13-6-2022	Hartley oscillator
	14-6-2022	Colpitt's oscillator
	15-6-2022	Revision
	16-6-2022	Revision
	17-6-2022	Test
	18-6-2022	Revision
	20-6-2022	Revision
	21-6-2022	Test
	22-6-2022	Revision

Lesson Plan (2021-22)

Name of the Assistant: RAVI SHANKAR
 Class and Section: B.Sc. 1st (ITn Sem) and Secⁿ - 8
 Subject: Mechanics and electronic device

Week	Date	Topics
	21-3-22	Elasticity, Hooke's law
	22-3-22	Elastic constants and their relation
	24-3-22	Poisson's ratio
	25-3-22	Torsion of cylinders and twisting couple
	26-3-22	Bending of beam
	28-3-22	Cantilevers
	29-3-22	Centrally loaded beam
	30-3-22	Problems
	31-3-22	Test Unit-1
	01-4-22	Assumptions of Kinetic Theory of gases
	2-4-22	Law of equipartition of energy
	4-4-22	its application for specific heat of gases.
	5-4-22	Maxwell distribution of speeds, velocity
	6-4-22	Experimental verification of Maxwell law of gas
	7-4-22	Most Probable speed
	8-4-22	Average and r.m.s. speed
	9-4-22	Mean free path
	11-4-22	Transfer of energy and momentum
	12-4-22	Diffusion of gases
	13-4-22	Brownian motion
	14-4-22	- Real gases
	15-4-22	Vander Waal's eqn
	16-4-22	Ref. Problems
	18-4-22	Test Unit-II
	19-4-22	Reference system
	20-4-22	Inertial frames
	21-4-22	- Galilean invariance
	22-4-22	Conservation laws
	23-4-22	Newtonian relativity principle
	25-4-22	Michelson-Morley experiment
	26-4-22	Search for ether
	27-4-22	Lorentz transformation
	28-4-22	Time dilation
	29-4-22	Velocity addition theorem
	30-4-22	Variation of mass with velocity
	2-5-22	- mass energy equivalence
	3-5-22	Problems
	4-5-22	Revision of Unit-III
	5-5-22	Length contraction
	6-5-22	Problems

Lesson Plan (2021-22)

Name of the Assistant: RAVI SHANKAR

Class and Section:

Subject:

Week	Date	Topics
	7-5-22	Test of Unit - III
	9-5-22	Growth and decay of current in a circuit
	10-5-22	Capacitance and resistance
	11-5-22	resistance and Inductance
	12-5-22	Capacitance and Inductance
	13-5-22	Capacitance resistance and Inductance
	14-5-22	A.C. circuit analysis using Complex Variables
	16-5-22	Series and parallel resonant circuit
	17-5-22	quality factor, resonance
	18-5-22	Test
	19-5-22	Energy bands in solids
	20-5-22	Intrinsic and extrinsic
	21-5-22	Semiconductors
	23-5-22	Hall-effect
	24-5-22	P-N Junction diode and V-I characteristics
	25-5-22	Zener and avalanche breakdown
	26-5-22	Resistance of a diode
	27-5-22	Light emitting diodes
	28-5-22	Photodiode, Solar cell
	30-5-22	"Half wave and Full wave rectifiers"
	31-5-22	Zener diode as voltage regulator
	1-6-22	Simple regulated power supply
	2-6-22	Junction Transistors, Bipolar Transistors
	3-6-22	Working of NPN and PNP transistors
	4-6-22	Transistor connection (C-B, C-E, C-C)
	6-6-22	Constraints of transistors
	7-6-22	Transistor characteristic curves
	8-6-22	Advantage of C-B configuration, CRO
	9-6-22	Transistor biasing
	10-6-22	Method of Transistor Biasing and Stabilization
	11-6-22	DC load line
	13-6-22	C-B, C-E transistor biasing
	14-6-22	Common-base emitter Amplifier
	15-6-22	Classification of amplifier
	16-6-22	R-C coupled amplifier
	17-6-22	Feed-back in amplifier
	18-6-22	advantage of -ve feedback emitter follower
	20-6-22	Condition for self Sustained oscillation
	21-6-22	Tuned oscillator
	22-6-22	Colpitts oscillator

