Dayanand Mahila Mahavidyalaya, Kurukshetra

Lesson Plan (Even Semester)

Session 2022-23 (01.02.2023 to 26.05.2023)

Name of Teacher……Mrs.Suman Rani……

Subject …Physics……

Week	Date	B.Sc 2nd	B.Sc 2nd
		Semester …4th……	**Semester 4th**
	01.02.2023	Microscopic and Macroscopic systems,events mutully exclusive, dependent and independent	
	02.02.2023		Polarization by reflection, refraction and scattering
	03.02.2023		Malus Law, Phenomenon of double refraction
	04.02.2023		Huygen's wave theory of double refraction
	06.02.2023	Probability , statistical probability,A priori probability and relation between them	
	07.02.2023	Probability theorem,some probability consideration	
	08.02.2023	combination possessing maximum probability, combination possessing minimum probability	
	09.02.2023		Analysis of polarized Light,Nicol prism,quarter wave plate and half wave playe
	10.02.2023		Production and detection of Plane polarized light
	11.02.2023		Production and detection of circularly polarized light
	13.02.2023	Tossing of 2,3 and any number of coins	
	14.02.2023	permutations and combinations	
	15.02.2023	Distribution of N	
	16.02.2023		Production and detection of Elliptical polarized light
	17.02.2023		Optical activity
	18.02.2023	**Maha Shivratri**	
	20.02.2023	distinguishable and indistinguishable particles in two boxes of equal size	
	21.02.2023	Micro and Macro states	
	22.02.2023	Thermodynamical probability	
	23.02.2023		Fresnel's theory of optical rotation
	24.02.2023		specific rotation
	25.02.2023		Polarimeters
	27.02.2023	constraints and accessible states	
	28.02.2023	Statistical fluctuations	
	01.03.2023	General distribution of distinguishable particles in compartment of different sizes	
	02.03.2023		Test of unit 1
	03.03.2023		Fourier theorem
	04.03.2023		Fourier series

Week	Date	B.Sc 2nd	B.Sc 2nd
		Semester …4th……	Semester 4th
	05.03.2023 to 12.03.2023	**Holi Vacations**	
	13.03.2023	Condition of equalibrium between two systems in thermal contact -beta parameters	
	14.03.2023	Entropy and Probability (Boltzman's Relation)	
	15.03.2023	Unit 2nd: Postulates of stastical physics	
	16.03.2023		evaluation of Fourier coefficient
	17.03.2023		Importance and limitations of Fourier theorem
	18.03.2023		even and odd functions
	20.03.2023	Phase space, Division of phase space into cells	
	21.03.2023	3 kinds of statistics	
	22.03.2023	Basic approach in 3 statistics	
	23.03.2023	**Shaheedi Diwas**	
	24.03.2023		Fourier series of functions f(X) (I) 0 to 2pi
	25.03.2023		-pi to pi
	27.03.2023	M B. statistics Applied to an ideal gas in equalibrium	
	28.03.2023	energy distribution law	
	29.03.2023	speed distribution law	
	30.03.2023	**Ram Navmi**	
	31.03.2023		Fourier functions 0 to pi
	01.04.2023		-L to L
	03.04.2023	velocity distribution law	
	04.04.2023	**Mahavir Jayanti**	
	05.04.2023	Expression for average speed ,r.m.s speed, average velocity,r.m.s velocity	
	06.04.2023		complex form of Fourier series
	07.04.2023		Application of Fourier theorem for analysis of complex wave
	08.04.2023		Solution of triangular and rectangular waves
	10.04.2023	most probable energy & mean energy	
	11.04.2023	Unit 3: Need for Quantum statistics:Bose Einstein energy distribution law	
	12.04.2023	Application of B.E stastics to Planck's radiation law	
	13.04.2023		Half and full wave rectifier outputs
	14.04.2023	**Vaisakhi/Dr. B.R. Ambedkar Jayanti**	
	15.04.2023		Parseval identity for Fourier series
	17.04.2023	B.E gas, Degeneracy and B.E consideration	
	18.04.2023	Fermi Dirac energy distribution law	
	19.04.2023	F.D gas and Degeneracy	
	20.04.2023		Fourier integrals

Week	Date	B.Sc 2nd	B.Sc 2nd
		Semester …4th……	Semester 4th
	21.04.2023		Unit 3:Fourier transform and it's properties
	22.04.2023	**Id-Ul-Fitr/Parshuram Jayant**	
	24.04.2023	Fermi energy and Fermi temperature, Fermi Dirac energy distribution law	
	25.04.2023	Fermi Dirac energy distribution law for elactron gas in metals	
	26.04.2023	Zero point energy,zero point pressure and average speed of electron gas	
	27.04.2023		Application of Fourier transform for evaluation of integrals
	28.04.2023		For solution of ordinary differential equations
	29.04.2023		some more functions
	01.05.2023	Specific heat anomaly of metals and it's solution	
	02.05.2023	M.B distribution as a limiting case of B.E and F.D distribution	
	03.05.2023	comparison of three stastics	
	04.05.2023		Matrix methods in paraxial optics,effects of translation and refraction
	05.05.2023		deviation of lens and thick lens formula
	06.05.2023		unit plane, nodal planes and system to thin lenses
	08.05.2023	Test of unit 3	
	09.05.2023	Dulong and petit law,derivation of dulong and Petit law from classical physics	
	10.05.2023	specific heat at low temperatures	
	11.05.2023		Chromatic , Spherical,Coma
	12.05.2023		Astigmatism and distortion aberration and their remedies
	13.05.2023		Fiber optics: Optical fibre, critical angel of propagation
	15.05.2023	Einstein theory of specific heat, Criticism of Einstein theory	
	16.05.2023	Debye model of specific heat of solids	
	17.05.2023	success and shortcomings of debye theory	
	18.05.2023		mode of propagation, Acceptance angle,fractional refractive index change
	19.05.2023		Numerical aperture,type of optical fiber,Normalized frequency
	20.05.2023		pulse dispersion, Attenuation, Application
	22.05.2023	**Maharan Partap Jayanti**	
	23.05.2023	comparison of Einstein and debye theories	
	24.05.2023		fiber optics communication, Advantages
	25.05.2023	Revision	

Week	Date	B.Sc 2nd	B.Sc 2nd
		Semester …4th……	Semester 4th
	26.05.2023		Revision

Dayanand Mahila Mahavidyalaya, Kurukshetra

Lesson Plan (Even Semester)

Session 2022-23 (01.02.2023 to 26.05.2023)

Name of Teacher……Mrs. Kiran Ganotra……

Subject ……Physics……

Week	Date	Class ……Bsc 3rd year (NM)……	Class ……BSc 3rd year (CSc)……
		Semester ……6th…	**Semester …6th……**
	01.02.2023	introduction to crystal structure	introduction to crystal structure
	02.02.2023	crystalline and glassy forms	crystalline and glassy forms
	03.02.2023	liquid crystals , crystal structure	liquid crystals , crystal structure
	04.02.2023	periodicity, lattice and crystal translation vectors and axes	periodicity, lattice and crystal translation vectors and axes
	06.02.2023	unit cell and primitive cell	unit cell and primitive cell
	07.02.2023	winger seitz primitive cell, symmetry operations for a two dimensional crystal	winger seitz primitive cell, symmetry operations for a two dimensional crystal
	08.02.2023	bravais lattice in two and three dimensions	bravais lattice in two and three dimensions
	09.02.2023	crystal plans and miler indies	crystal plans and miler indies
	10.02.2023	interplaner spacing	interplaner spacing
	11.02.2023	crystal structure of zinc sulphide	crystal structure of zinc sulphide
	13.02.2023	sodium chloride and diamond	sodium chloride and diamond
	14.02.2023	revision	revision
	15.02.2023	revision	revision
	16.02.2023	introduction of early observation, emission and absorption spectra	introduction of early observation, emission and absorption spectra
	17.02.2023	atomic spectra, wave number	atomic spectra, wave number
	18.02.2023	**Maha Shivratri**	
	20.02.2023	spectra of hydrogen atom in Balmer series	spectra of hydrogen atom in Balmer series
	21.02.2023	Bohr atomic model (Bohr's postulates)	Bohr atomic model (Bohr's postulates)
	22.02.2023	spectra of hydrogen atom explanation of spectral series in hydrogen atom	spectra of hydrogen atom explanation of spectral series in hydrogen atom
	23.02.2023	un- quantized states and continuous spectra	un- quantized states and continuous spectra
	24.02.2023	spectral series in absorption spectra, effect of nuclear motion on line spectra (correction of finite nuclear mass)	spectral series in absorption spectra, effect of nuclear motion on line spectra (correction of finite nuclear mass)
	25.02.2023	variation in Rydberg constant due to finite mass	variation in Rydberg constant due to finite mass
	27.02.2023	short comings of Bohr's theory, Wilson sommerfeld quantization rule	short comings of Bohr's theory, Wilson sommerfeld quantization rule
	28.02.2023	de- Broglie interpretation of Bohr quantization law	de- Broglie interpretation of Bohr quantization law
	01.03.2023	Bohr's corresponding principle, short comings of Bohr- sommerfeld theory	Bohr's corresponding principle, short comings of Bohr- sommerfeld theory
	02.03.2023	vector atom model	vector atom model
	03.03.2023	space quantization,electron spin	space quantization,electron spin
	04.03.2023	coupling of orbital and spin angular momentum	coupling of orbital and spin angular momentum

Week	Date	Class ……Bsc 3rd year (NM)……	Class ……BSc 3rd year (CSc)……
		Semester ……6th…	Semester …6th……
	05.03.2023 to 12.03.2023	**Holi Vacations**	
	13.03.2023	spectroscopic terms and their notation	spectroscopic terms and their notation
	14.03.2023	quantum numbers associated with vector atom model	quantum numbers associated with vector atom model
	15.03.2023	transition probability and selection rules	transition probability and selection rules
	16.03.2023	revision	revision
	17.03.2023	revision	revision
	18.03.2023	X-ray diffraction	X-ray diffraction
	20.03.2023	Bragg's law and experimental X-ray diffraction methods	Bragg's law and experimental X-ray diffraction methods
	21.03.2023	K- space and reciprocal lattice and it's physical significance	K- space and reciprocal lattice and it's physical significance
	22.03.2023	reciprocal lattice vectors	reciprocal lattice vectors
	23.03.2023	**Shaheedi Diwas**	
	24.03.2023	reciprocal lattice to a simple cubic lattice	reciprocal lattice to a simple cubic lattice
	25.03.2023	body -centred- cubic and face - centred - cubic	body -centred- cubic and face - centred - cubic
	27.03.2023	revision	revision
	28.03.2023	revision	revision
	29.03.2023	orbital, magnetic dipole moment (Bohr megnaton)	orbital, magnetic dipole moment (Bohr megnaton)
	30.03.2023	**Ram Navmi**	
	31.03.2023	behaviour of magnetic dipole in external, magnetic filled	behaviour of magnetic dipole in external, magnetic filled
	01.04.2023	Larmor's precession and theorem	Larmor's precession and theorem
	03.04.2023	penetrating and non penetrating orbits, penetrating orbits on the classical model	penetrating and non penetrating orbits, penetrating orbits on the classical model
	04.04.2023	**Mahavir Jayanti**	
	05.04.2023	quantum defect spin orbit interaction energy of the single balance electron spin orbit interaction for penetrating and non penetrating orbits quantum mechanical relativity correction	quantum defect spin orbit interaction energy of the single balance electron spin orbit interaction for penetrating and non penetrating orbits quantum mechanical relativity correction
	06.04.2023	hydrogen fine spectra	hydrogen fine spectra
	07.04.2023	main features of alkali spectra and their theoretical interpretation	main features of alkali spectra and their theoretical interpretation
	08.04.2023	term series'and limits	term series'and limits
	10.04.2023	Rydberg- Ritze combination principle	Rydberg- Ritze combination principle
	11.04.2023	absorption spectra of Alkali atoms	absorption spectra of Alkali atoms
	12.04.2023	observed doublet fine structure in the spectra of Alkali metals and it's interpretation	observed doublet fine structure in the spectra of Alkali metals and it's interpretation
	13.04.2023	intensity rules for doublet	intensity rules for doublet
	14.04.2023	**Vaisakhi/Dr. B.R. Ambedkar Jayanti**	
	15.04.2023	comparison of Alkali spectra and hydrogen spectrum	comparison of Alkali spectra and hydrogen spectrum
	17.04.2023	revision	revision

Week	Date	Class ……Bsc 3rd year (NM)……	Class ……BSc 3rd year (CSc)……
		Semester ……6th…	Semester …6th……
	18.04.2023	revision	revision
	19.04.2023	Historical introduction of superconductivity	Historical introduction of superconductivity
	20.04.2023	survey of superconductivity, super conducting system	survey of superconductivity, super conducting system
	21.04.2023	High Tv super conductor	High Tv super conductor
	22.04.2023	**Id-Ul-Fitr/Parshuram Jayant**	
	24.04.2023	Isotopic effect, critical magnetic field	Isotopic effect, critical magnetic field
	25.04.2023	Meissner effect, London theory and Peppard's equation	Meissner effect, London theory and Peppard's equation
	26.04.2023	classification of superconductors(type I and type II)	classification of superconductors(type I and type II)
	27.04.2023	theory of superconductivity, flux quantization, Josephson effect (AC and DC)	theory of superconductivity, flux quantization, Josephson effect (AC and DC)
	28.04.2023	Practical application of superconductivity and their limitations, power application of superconductors	Practical application of superconductivity and their limitations, power application of superconductors
	29.04.2023	revision	revision
	01.05.2023	essential features of spectra of Alkaline-earth elements, vector model for two valance electron atom: application of spectra	essential features of spectra of Alkaline-earth elements, vector model for two valance electron atom: application of spectra
	02.05.2023	coupling schemes, LS coupling scheme and JJ coupling scheme	coupling schemes, LS coupling scheme and JJ coupling scheme
	03.05.2023	interaction energy in LS coupling, lande interval rule	interaction energy in LS coupling, lande interval rule
	04.05.2023	paull principle and periodic classification of the elements	paull principle and periodic classification of the elements
	05.05.2023	interaction energy in JJ coupling, equivalent and non equivalent electrons	interaction energy in JJ coupling, equivalent and non equivalent electrons
	06.05.2023	two valance electron system- spectra terms of non equivalent and equivalent electrons	two valance electron system- spectra terms of non equivalent and equivalent electrons
	08.05.2023	comparison of spectral terms in LS and JJ coupling, hyperfine structure of spectral lines and it's origin	comparison of spectral terms in LS and JJ coupling, hyperfine structure of spectral lines and it's origin
	09.05.2023	isotope effect, nuclear spin	isotope effect, nuclear spin
	10.05.2023	revision	revision
	11.05.2023	definition of nano physics, length scale, importance of Nano- scale and technology, history of nano technology	definition of nano physics, length scale, importance of Nano- scale and technology, history of nano technology
	12.05.2023	benefits ay challenges in molecular manufacturing, molecular assembler concept	benefits ay challenges in molecular manufacturing, molecular assembler concept
	13.05.2023	undertad advanced capabilities, vision and objectives of Nano technology, Nano technology in different fields	undertad advanced capabilities, vision and objectives of Nano technology, Nano technology in different fields

Week	Date	Class ……Bsc 3rd year (NM)……	Class ……BSc 3rd year (CSc)……
		Semester ……6th…	**Semester …6th……**
	15.05.2023	automobile, electronic, nano biotechnology, material, medicine	automobile, electronic, nano biotechnology, material, medicine
	16.05.2023	revision	revision
	17.05.2023	Zeeman effect, experimental setup for studying Zeeman effect	Zeeman effect, experimental setup for studying Zeeman effect
	18.05.2023	explanation of normal Zeeman effect, explanation of anomalous Zeeman effect (Lande g- factor)	explanation of normal Zeeman effect, explanation of anomalous Zeeman effect (Lande g- factor)
	19.05.2023	Zeeman pattern of D1 and D2 lines of Na - atom, Padchen - Back effect of a single valence electron system	Zeeman pattern of D1 and D2 lines of Na - atom, Padchen - Back effect of a single valence electron system
	20.05.2023	Weak field Stark effect of Hydrogen atom	Weak field Stark effect of Hydrogen atom
	22.05.2023	**Maharan Partap Jayanti**	
	23.05.2023	general considerations, electronic states of diatomic molecules	general considerations, electronic states of diatomic molecules
	24.05.2023	rotational spectra, vibrational spectra, rotator model of diatomic molecule	rotational spectra, vibrational spectra, rotator model of diatomic molecule
	25.05.2023	Raman effect, electronic specta	Raman effect, electronic specta
	26.05.2023	revision	revision

Dayanand Mahila Mahavidyalaya, Kurukshetra

Lesson Plan (Even Semester)

Session 2022-23 (01.02.2023 to 26.05.2023)

Name of Teacher - Sonal Vats

Subject - Physics

Week	Date	Class ……B sc 1……	
		2nd	
	01.02.2023	Introduction	
	02.02.2023	energy band in solids, intrinsic and extrinsic semiconductor	
	03.02.2023	mobility and resistivity, halls effect	
	04.02.2023	pn junction diode and characteristics	
	06.02.2023	zener and avalanche breakdown, zener diode	
	07.02.2023	LED, photodiode	
	08.02.2023	solar cells, rectifier	
	09.02.2023	rectifier	
	10.02.2023	rivision	
	11.02.2023	moment of inertia, angular momentum	
	13.02.2023	theorem of perpendicular and parallel axis	
	14.02.2023	moment of inertia of solid sphere, hollow sphere	
	15.02.2023	moment of inertia of spherical shell	
	16.02.2023	moment of inertia of solid and hollow cylinder	
	17.02.2023	fly wheel, moment of inertia of an irregular body	
	18.02.2023	**Maha Shivratri**	
	20.02.2023	test of unit 1 (paper 2)	
	21.02.2023	rivision	
	22.02.2023	test of unit 1 (paper 1)	
	23.02.2023	working of npn and pnp transistor	
	24.02.2023	three configuration of transistor	
	25.02.2023	common base transistor	
	27.02.2023	common emitter transistor	
	28.02.2023	common collector transistor	
	01.03.2023	advantages and disadvantage	
	02.03.2023	dc load line , transistor biasing	
	03.03.2023	rivision and test	
	04.03.2023	elasticity, stress and strain	
	05.03.2023 – 12.03.2023	**Holi Vacations**	
	13.03.2023	hooks law , elastic constants	
	14.03.2023	Poisson ratio, torsion of cylinder	
	15.03.2023	Maxwell needle	
	16.03.2023	bending of beam	

Week	Date	Class ……B sc 1……	
		2nd	
	17.03.2023	cantilever and centrally loaded beam	
	18.03.2023	rivision	
	20.03.2023	amplifier and classification	
	21.03.2023	common base and common emitter amplifier	
	22.03.2023	coupling in amplifier	
	23.03.2023	**Shaheedi Diwas**	
	24.03.2023	RC coupled amplifier	
	25.03.2023	feedback in amplifier	
	27.03.2023	advantages and disadvantage	
	28.03.2023	rivision and test	
	29.03.2023	assumption of kinetic theory of gases	
	30.03.2023	**Ram Navmi**	
	31.03.2023	pressure of an ideal gas	
	01.04.2023	kinetic interpretation of temperature	
	03.04.2023	ideal gas equation, degree of freedom	
	04.04.2023	**Mahavir Jayanti**	
	05.04.2023	law of equipartition of energy and application	
	06.04.2023	vanderwaal equation, brownian motion	
	07.04.2023	rivision	
	08.04.2023	oscillator	
	10.04.2023	principal of oscillator	
	11.04.2023	classification of oscillator	
	12.04.2023	condition of self sustained oscillation	
	13.04.2023	barkhausen criterion for oscillation	
	14.04.2023	**Vaisakhi/Dr. B.R. Ambedkar Jayanti**	
	15.04.2023	tuned collector common emitter oscillator	
	17.04.2023	Hartley oscillator	
	18.04.2023	Hartley oscillator	
	19.04.2023	CRO	
	20.04.2023	CRO	
	21.04.2023	CRO	
	22.04.2023	**Id-Ul-Fitr/Parshuram Jayant**	
	24.04.2023	rivision.	
	25.04.2023	test	
	26.04.2023	Maxwell distribution of speed	
	27.04.2023	Maxwell distribution of velocity	
	28.04.2023	experimental verification of Maxwell law of speed distribution	
	29.04.2023	experimental verification of Maxwell law of speed distribution	

Week	Date	Class ……B sc 1……	
		2nd	
	01.05.2023	most probable speed	
	02.05.2023	average speed	
	03.05.2023	RMS speed	
	04.05.2023	mean free path	
	05.05.2023	transport of energy	
	06.05.2023	transport of momentum	
	08.05.2023	diffusion of gases	
	09.05.2023	rivision	
	10.05.2023	rivision	
	11.05.2023	test of unit 4	
	12.05.2023	series inductor	
	13.05.2023	shunt capacitance	
	15.05.2023	various methods of transistor biasing and stabilization	
	16.05.2023	test	
	17.05.2023	distortion in amplifier	
	18.05.2023	tuned oscillator	
	19.05.2023	searles method	
	20.05.2023	mean free path	
	22.05.2023	**Maharan Partap Jayanti**	
	23.05.2023	test	
	24.05.2023	rivision	
	25.05.2023	rivision	
	26.05.2023	test	