

Dayanand Mahila Mahavidyalaya, Kurukshetra

Lesson Plan (Odd Semester)

Session 2021-22 (08.10.2021 to 22.02.2022)

Name of Teacher.....Mrs. Kiran Ganotra.....

SubjectPhysics.....

Week	Date	ClassBSc- 2nd (NM)	ClassBSc- 2nd(CSc).....
		Semester3rd...	Semester3rd...
	08.10.2021	Orientation Course	
	09.10.2021	Orientation Course	
	11.10.2021	Bridge courses	Bridge courses
	12.10.2021	Bridge courses	Bridge courses
	13.10.2021	Computer organization, binary representation	Computer organization, binary representation
	14.10.2021	Algorithm development	Algorithm development
	15.10.2021	Dussehra	
	16.10.2021	Flow chart, Fortran preliminaries	Flow chart, Fortran preliminaries
	18.10.2021	built in function	built in function
	19.10.2021	executable and non - executable statements	executable and non - executable statements
	20.10.2021	Maharishi Balmiki Jayanti	
	21.10.2021	input and output statements	input and output statements
	22.10.2021	format statement	format statement
	23.10.2021	if, do statement	if, do statement
	25.10.2021	Goto statement	Goto statement
	26.10.2021	Dimension arrays	Dimension arrays
	27.10.2021	Statement function	Statement function
	28.10.2021	Function subprogram	Function subprogram
	29.10.2021	Revision	Revision
	30.10.2021	Revision	Revision
	31.10.2021 to 07.11.2021	Diwali Vacations	
	08.11.2021	interference by division of wave front	interference by division of wave front
	09.11.2021	Young's double slit experiment	Young's double slit experiment
	10.11.2021	Coherence, condition of interference	Coherence, condition of interference
	11.11.2021	Fresne's biprism	Fresne's biprism
	12.11.2021	Application to determine of wavelength of sodium light	Application to determine of wavelength of sodium light
	13.11.2021	Thickness of a mica sheet	Thickness of a mica sheet
	15.11.2021	Lloy's mirror	Lloy's mirror
	16.11.2021	Difference between bi-prism and Lloyd mirror fringes	Difference between bi-prism and Lloyd mirror fringes
	17.11.2021	Phase change on reflection	Phase change on reflection
	18.11.2021	Revision	Revision
	19.11.2021	Guru Nanak Dev Jayanti	
	20.11.2021	Programming for print out of natural numbers	Programming for print out of natural numbers
	22.11.2021	NAAC TEAM VISIT	
	23.11.2021	NAAC TEAM VISIT	
	24.11.2021	Range of the set of given numbers	Range of the set of given numbers
	25.11.2021	Ascending and descending order	Ascending and descending order
	26.11.2021	Mean and standard deviations	Mean and standard deviations
	27.11.2021	Least square fitting of curve	Least square fitting of curve
	29.11.2021	Roots of quardic equation	Roots of quardic equation
	30.11.2021	Product of two matrices	Product of two matrices

	01.12.2021	Numerical integration (Trapezoidal rule)	Numerical integration (Trapezoidal rule)
	02.12.2021	Simpson 1/3 rule	Simpson 1/3 rule
	03.12.2021	Revision	Revision
	04.12.2021	interference by division of amplitude	interference by division of amplitude
	06.12.2021	Thin film, plane parallel film	Thin film, plane parallel film
	07.12.2021	Interference due to transmitted light	Interference due to transmitted light
	08.12.2021	wedge shaped film	wedge shaped film
	09.12.2021	Newto's rings	Newto's rings
	10.12.2021	Interferometer	Interferometer
	11.12.2021	Michelson interferometer	Michelson interferometer
	13.12.2021	application of standardization of a meter	application of standardization of a meter
	14.12.2021	Determination of wavelength	Determination of wavelength
	15.12.2021	Revision	Revision
	16.12.2021	Revision	Revision
	17.12.2021	Thermodynamics system and Zeroth law of thermodynamics	Thermodynamics system and Zeroth law of thermodynamics
	18.12.2021	First law of thermodynamics and its limitations	First law of thermodynamics and its limitations
	20.12.2021	Reversible and irreversible process	Reversible and irreversible process
	21.12.2021	Second law of thermodynamics and its significance	Second law of thermodynamics and its significance
	22.12.2021	Carnot theorem	Carnot theorem
	23.12.2021	Absolute scale of temperature, absolute zero	Absolute scale of temperature, absolute zero
	24.12.2021	Joule free's expansion	Joule free's expansion
	25.12.2021	Christmas	
	27.12.2021	Joule Thomson effect	Joule Thomson effect
	28.12.2021	Joule Thomson (Porous plug) experiment, conclusion and explanation	Joule Thomson (Porous plug) experiment, conclusion and explanation
	29.12.2021	Analytical treatment of Joule Thomson effect	Analytical treatment of Joule Thomson effect
	30.12.2021	Entropy, calculations of entropy of reversible and irreversible process	Entropy, calculations of entropy of reversible and irreversible process
	31.12.2021	T - S diagram, entropy of a perfect gas	T - S diagram, entropy of a perfect gas
	01.01.2022	Nernst heat law(third law of thermodynamics)	Nernst heat law(third law of thermodynamics)
	03.01.2022	Liquefaction of gases	Liquefaction of gases
	04.01.2022	Solidification of He below 4K	Solidification of He below 4K
	05.01.2022	Cooling by adiabatic demagnetization	Cooling by adiabatic demagnetization
	06.01.2022	Revision	Revision
	07.01.2022	Revision	Revision
	08.01.2022	Huygens- Fresnel's theory	Huygens- Fresnel's theory
	10.01.2022	Fresnel's assumption	Fresnel's assumption
	11.01.2022	rectilinear propagation of light	rectilinear propagation of light
	12.01.2022	Fresnel's half period zones	Fresnel's half period zones
	13.01.2022	Zone plate	Zone plate
	14.01.2022	Diffraction at a straight edge	Diffraction at a straight edge
	15.01.2022	Diffraction at a circular aperture	Diffraction at a circular aperture
	17.01.2022	Diffraction due to a narrow slit	Diffraction due to a narrow slit
	18.01.2022	Diffraction due to a narrow wire	Diffraction due to a narrow wire
	19.01.2022	Revision	Revision
	20.01.2022	Revision	Revision
	21.01.2022	Derivation of Clausius - Clapeyron and Clausius latent heat equation	Derivation of Clausius - Clapeyron and Clausius latent heat equation
	22.01.2022	Significance of Clausius - Clapeyron equation	Significance of Clausius - Clapeyron equation

24.01.2022	Specific heat of saturated vapours	Specific heat of saturated vapours
25.01.2022	Phase diagram	Phase diagram
26.01.2022	Republic Day	
27.01.2022	Triple point of a substance	Triple point of a substance
28.01.2022	Development of Maxwell thermodynamical relations	Development of Maxwell thermodynamical relations
29.01.2022	Thermodynamical functions : Internal energy	Thermodynamical functions : Internal energy
31.01.2022	Helmholtz function	Helmholtz function
01.02.2022	Enthalpy	Enthalpy
02.02.2022	Gibbs function and the relations between different thermodynamical functions	Gibbs function and the relations between different thermodynamical functions
03.02.2022	Derivation of Maxwell thermodynamical relations from thermodynamical functions	Derivation of Maxwell thermodynamical relations from thermodynamical functions
04.02.2022	Applications of Maxwell relations	Applications of Maxwell relations
05.02.2022	Basant Panchami	
07.02.2022	Relations between two specific heats of a gas	Relations between two specific heats of a gas
08.02.2022	Derivation of Clausius - Clapeyron heat equation	Derivation of Clausius - Clapeyron heat equation
09.02.2022	Derivation of stefans law	Derivation of stefans law
10.02.2022	Deduction of theory of Joule Thomson effect	Deduction of theory of Joule Thomson effect
11.02.2022	Revision	Revision
12.02.2022	Fraunhofer diffraction : one slit diffraction	Fraunhofer diffraction : one slit diffraction
14.02.2022	Two slit diffraction	Two slit diffraction
15.02.2022	N- slit diffraction	N- slit diffraction
16.02.2022	Guru Ravidas Jayanti	
17.02.2022	plane transmission grating spectrum	plane transmission grating spectrum
18.02.2022	Dispersive power of grating, limit of resolution	Dispersive power of grating, limit of resolution
19.02.2022	Rayleigh's criterion , Resolving power of telescope and a grating	Rayleigh's criterion , Resolving power of telescope and a grating
21.02.2022	Revision	Revision
22.02.2022	Revision	Revision

Name of Teacher ...Ms. Mahak

Subject ...Physics

Week	Date	Class ...B.Sc.(NM+CS)	Class .. B. Sc. (NM+CS)
		Semester .. 5th , paper-1	Semester ...5th , paper-2
	08.10.2021	Orientation Course	
	09.10.2021	Orientation Course	
	11.10.2021	Overview, scale of quantum physics, boundary between classical and quantum phenomena, Photon	
	12.10.2021	Photoelectric effect, Compton effect, Frank Hertz experiment	
	13.10.2021	de-Broglie hypothesis, Davisson and Germer experiment	
	14.10.2021	G.P. Thomson experiment, Phase velocity, group velocity and their relation	
	15.10.2021	Dussehra	
	16.10.2021	Heisenberg's uncertainty principle. Time energy and angular momentum, position uncertainty	

18.10.2021	Uncertainty principle from de Broglie wave. (Wave-particle duality). Gamma Ray Microscope	
19.10.2021	Electron diffraction from a slit, numerical practice	
20.10.2021	Maharishi Balmiki Jayanti	
21.10.2021	Derivation of 1-D time-dependent Schrodinger wave equation (subject to force, free particle)	
22.10.2021	Time-independent Schrodinger wave equation, eigen values, eigen functions	
23.10.2021	wave functions and its significance. Orthogonality and Normalization of function, concept of observer and operator	
25.10.2021	Expectation values of dynamical quantities, probability current density	
26.10.2021	doubt session	
27.10.2021		Nuclear composition, Nuclear properties; Nuclear size, spin, parity, statistics, magnetic dipole moment
28.10.2021		quadruple moment, Determination of mass by Bain-Bridge
29.10.2021		Bain-Bridge and Jordan mass spectrograph
30.10.2021		Determination of charge by Mosley Law
31.10.2021 to 07.11.2021	Diwali Vacations	
08.11.2021		Determination of size of nuclei by Rutherford Back Scattering. mass and binding energy
09.11.2021		systematic of nuclear binding energy, nuclear stability
10.11.2021		doubt session
11.11.2021		revision
12.11.2021		test of unit-1
13.11.2021	Free particle in one-dimensional box (introduction)	
15.11.2021	Free particle in one-dimensional box (solution of Schrodinger wave equation, eigen functions, eigen values)	
16.11.2021	Free particle in one-dimensional box (quantization of energy and momentum, nodes and anti nodes, zero point energy).	
17.11.2021	One dimensional step potential $E > V_0$ (Reflection and Transmission coefficient)	
18.11.2021	One dimensional step potential $E > V_0$ (Reflection and Transmission coefficient)	
19.11.2021	Guru Nanak Dev Jayanti	
20.11.2021	numerical practice	
22.11.2021	NAAC TEAM VISIT	
23.11.2021	NAAC TEAM VISIT	

24.11.2021	One dimensional step potential $E < V_0$ (penetration depth calculation).	
25.11.2021	One dimensional potential barrier, $E > V_0$ (Reflection and Transmission coefficient)	
26.11.2021	One dimensional potential barrier, $E > V_0$ (Reflection and Transmission coefficient)	
27.11.2021	One-dimensional potential barrier, $E < V_0$ (penetration or tunneling coefficient)	
29.11.2021	Solution of Schrodinger equation for harmonic oscillator	
30.11.2021	quantization of energy, Zero-point energy	
01.12.2021	wave equation for ground state and excited states	
02.12.2021	revision	
03.12.2021	doubts session	
04.12.2021	test-2	
06.12.2021		Alpha-disintegration and its theory
07.12.2021		Energetics of alpha-decay, Origin of continuous beta spectrum
08.12.2021		types of beta-decay and energetics of beta-decay
09.12.2021		Nature of gamma rays
10.12.2021		Energetics of gamma rays.
11.12.2021		revision, doubt session
13.12.2021		students presentation on nuclear physics
14.12.2021		students presentation on nuclear physics
15.12.2021		students presentation on nuclear physics
16.12.2021		Interaction of heavy charged particles (Alpha particles); Energy loss of heavy charged particle
17.12.2021		Range and straggling of alpha particles.Geiger-Nuttal law.
18.12.2021		Interaction of light charged particle (Beta-particle), Energy loss of beta-particles (ionization), Range of electrons,
20.12.2021		absorption of beta-particles. Interaction of Gamma Ray; Passage of Gamma radiations through matter
21.12.2021		electron-positron annihilation. Absorption of Gamma rays
22.12.2021		application of gamma ray
23.12.2021		doubt session
24.12.2021		test(sessional)
25.12.2021	Christmas	
27.12.2021	Absorption and emission of radiation, Main features of a laser: Directionality, high intensity, high degree of coherence,	

28.12.2021	spatial and temporal coherence, Einstein's coefficients and possibility of amplification,	
29.12.2021	momentum transfer, life time of a level, kinetics of optical absorption	
30.12.2021	.population inversion: A necessary condition for light amplification, resonance cavity,	
31.12.2021	laser pumping, Threshold condition for laser emission, line broadening mechanism	
01.01.2022	homogeneous and inhomogeneous line broadening	
03.01.2022	revision and doubt session	
04.01.2022		Linear accelerator
05.01.2022		Tandem accelerator
06.01.2022		Cyclotron
07.01.2022		Betatron accelerators
08.01.2022		Gas filled counters
10.01.2022		Ionization chamber
11.01.2022		proportional counter
12.01.2022		G.M. Counter
13.01.2022		Scintillation counter
14.01.2022		semiconductor detector
15.01.2022		revision
17.01.2022		test -Unit-III
18.01.2022	He-Ne laser	
19.01.2022	ruby laser	
20.01.2022	Optical properties of semiconductor	
21.01.2022	semiconductor laser	
22.01.2022	Applications of lasers in the field of medicine and industry.	
24.01.2022	revision of full syllabus	
25.01.2022	doubts session	
26.01.2022	Republic Day	
27.01.2022	numerical practice	
28.01.2022	revision	
29.01.2022	doubt session	
31.01.2022	full length test of paper-1	
01.02.2022		Nuclear reactions
02.02.2022		Elastic scattering, Inelastic scattering
03.02.2022		Nuclear disintegration, Photonic nuclear reaction
04.02.2022		Radiative capture, Direct reaction
05.02.2022	Basant Panchami	
07.02.2022		Heavy ion reactions and spallation Reactions
08.02.2022		Conservation laws, Q-value and reaction threshold
09.02.2022		numerical practice
10.02.2022		Nuclear Reactors
11.02.2022		General aspects of Reactor Design
12.02.2022		Nuclear fission and fusion reactors
14.02.2022		numerical practice
15.02.2022		doubt session
16.02.2022	Guru Ravidas Jayanti	
17.02.2022		full length test of paper-2
18.02.2022		revision

	19.02.2022	revision	
	21.02.2022	doubt session	doubt session
	22.02.2022	full length test of paper-1&2	full length test of paper-1&2

Name of Teacher.....Mrs. Suman Rani.....

SubjectPhysics

Week	Date	Class ...B.Sc. 1st.....	Class ...B.Sc. 1st
		Semester ...1st.....	Semester ..1st
	08.10.2021	Orientation Course	
	09.10.2021	Orientation Course	
	11.10.2021	Bridge course	
	12.10.2021	Bridge course	
	13.10.2021	Mechanics of single and system of particles	
	14.10.2021		Gradient of a scalar and its physical significance
	15.10.2021	Dussehra	
	16.10.2021		Line ,Surface and Volume integrals and their physical significance
	18.10.2021	conservation law of linear momentum and angular momentum	
	19.10.2021	Mechanical energy for a particle and a system of particles	
	20.10.2021	Maharishi Balmiki Jayanti	
	21.10.2021		Flux of vector field,divergence
	22.10.2021		Curl of a vector and their physical significance
	23.10.2021		Gauss's divergence theorem and Stokes's theorem
	25.10.2021	Centre of mass and equation of motion	
	26.10.2021	Constrained motion	
	27.10.2021	Problems of 1st unit	
	28.10.2021		Derivation of electric field E from potential as gradient
	29.10.2021		Derivation of Laplace and Poisson equation
	30.10.2021		Gauss's Law,Mechanical force of charged surface and energy per unit volume
	31.10.2021 to 07.11.2021	Diwali Vacations	
	08.11.2021	Degree of freedom and generalized co-ordinates	
	09.11.2021	Transformation equations,Generalized Displacement,velocity, Acceleration	
	10.11.2021	Momentum,Force and Potential	
	11.11.2021		Problems of 1st unit
	12.11.2021		Magnetic induction, Magnetic flux
	13.11.2021		Solenoidal nature of vector field of induction, Properties of B
	15.11.2021	Hamilton variational principle,Lagrange equation of motion	
	16.11.2021	Linear Harmonic Oscillator, Simple Pendulum	
	17.11.2021	Atwood machine and Problem of unit 2	
	18.11.2021		Electronic theory of dia and paramagnetism
	19.11.2021	Guru Nanak Dev Jayanti	

20.11.2021		Domain theory of ferromagnetism
22.11.2021	NAAC TEAM VISIT	
23.11.2021	NAAC TEAM VISIT	
24.11.2021	Problems of 2nd unit	
25.11.2021		Cycle of magnetization- Hysteresis loop
26.11.2021		Problems of unit 2
27.11.2021		Maxwell equation and their derivation
29.11.2021	Frame of reference	
30.11.2021	Limitations of Newton's law of motion	
01.12.2021	Inertial frame of reference ,Galilean transformation	
02.12.2021		Displacement current
03.12.2021		Vector and Scalar potentials
04.12.2021		Boundary conditions at interface between two different media
06.12.2021	Frame of reference with linear acceleration	
07.12.2021	Classical relativity- Galilean invariance	
08.12.2021	Transformation equations for a frame of reference	
09.12.2021		Boundary Conditions
10.12.2021		Propagation of e-m waves
11.12.2021		Poynting vector
13.12.2021	Inclined Plane	
14.12.2021	Rotating frame of Reference	
15.12.2021	Non- Inertial frames	
16.12.2021		Poynting theorems
17.12.2021		Problems of unit 3
18.12.2021		Test of unit 1
20.12.2021	Accelerated frame of reference	
21.12.2021	Rotating frame of reference	
22.12.2021	Effect of centrifugal force	
23.12.2021		Discussion of unit 1 Test
24.12.2021		Test of unit 2
25.12.2021	Christmas	
27.12.2021	Effect of coriolis force due to earth rotation	
28.12.2021	Fundamentals frame of reference	
29.12.2021	Michelson Morley experiment	
30.12.2021		A.C. circuit analysis using complex variable
31.12.2021		discussion of unit 2 test
01.01.2022		CR circuits
03.01.2022	Revision of Michelson and Morley experiment	
04.01.2022	Concept of Einstein relativity	
05.01.2022	Test of unit 1	
06.01.2022		LR circuits
07.01.2022		LC capacitance
08.01.2022		Sessional Test
10.01.2022	Discussion of unit 1st test	
11.01.2022	Special theory of relativity	
12.01.2022	Lorentz co- ordinates	
13.01.2022		Discussion of Test
14.01.2022		LCR circuit
15.01.2022		Test of unit 3

	17.01.2022	Physical significance of Lorentz invariance	
	18.01.2022	Length Contraction	
	19.01.2022	Time Dilation	
	20.01.2022		Series Resonant circuit
	21.01.2022		Parallel Resonant circuit
	22.01.2022		Discussion of unit 3 test
	24.01.2022	Twin Paradox	
	25.01.2022	Velocity addition Theorem	
	26.01.2022	Republic Day	
	27.01.2022		Quality Factor
	28.01.2022		Sharpeness of resonance
	29.01.2022		Problems of unit 4
	31.01.2022	Variation of mass with velocity	
	01.02.2022	Mass energy equivalence	
	02.02.2022	Transformation of relativistic momentum and energy	
	03.02.2022		Test of unit 4
	04.02.2022		Discussion of unit 4 test
	05.02.2022	Basant Panchami	
	07.02.2022	Relation between relativistic momentum and energy	
	08.02.2022	Relation for Mass ,velocity and momentum	
	09.02.2022	Energy of zero rest mass	
	10.02.2022		Discussion of Assignment
	11.02.2022		Revision of unit 1
	12.02.2022		Revision of unit 2
	14.02.2022	Problems of unit 4	
	15.02.2022	Test of unit 4	
	16.02.2022	Guru Ravidas Jayanti	
	17.02.2022		Unit 1 and 2 Combined test
	18.02.2022		Revision of unit 3
	19.02.2022		Revision of unit 4
	21.02.2022	Revision of unit 1	
	22.02.2022	Revision of unit 2	