

2023-24

Lesson Plan (2021-22)

Name of the Assistant: RAVI SHANKAR

Class and Section: B.Sc 1st year (1st sem)

Subject: PHYSICS (Mechanics & Electricity and Magnetism)

Week	Date	Topics
1	17.08.2023	Unit-1, Introduction, Mechanics of single & system of particles
	18.08.23	Conservation law of linear m.m., angular m.m. & mechanical energy.
	19.08.23	Centre of mass & eqm of motion.
2	21.08.2023	Constrained motion, degree of freedom
	22.08.23	TEST
	23.08.23	Unit-II, Introduction, Generalized coordinates, displacement, velocity
	24.08.23	Acceleration, m.m., force
	25.08.23	Generalization - Potential, Hamiltonian variational principle
	26.08.23	Lagrange's eqn of motion from Hamilton's Principle
3	28.08.23	Linear harmonic oscillator.
	29.08.23	Simple pendulum
	30.08.23	Raksha Bandan
	01.09.23	Advanced machine
	02.09.23	TEST
4	04.09.23	Unit-III, Introduction, Rotation of rigid body
	05.09.23	Moment of inertia, torque, angular momentum
	06.09.23	Jannashtani
	07.09.23	Kinetic energy of rotation
	08.09.23	Theorem of P and parallel axis with proof
	09.09.23	Moment of inertia of solid sphere
	11.09.23	hollow sphere
5	12.09.23	spherical shell, solid cylinders
	13.09.23	Hollow cylinders
	14.09.23	Solid bar of right angular cross-section
	15.09.23	Acceleration of a body falling down an inclined plane
	16.09.23	Revision
	18.09.23	TEST
6	19.09.23	Revision
	20.09.23	do
	21.09.23	do
	22.09.23	do
	23.09.23	do
	25.09.23	Shahedi Dumas
7	25.09.23	Paper-III, Unit-4, Introduction, mathematical Background
	26.09.23	Scalars and Vectors, dot and cross product
	27.09.23	Triple Vector product
	28.09.23	Scalar and Vector fields.



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 Subject: Physics

Week	Date	Topics
	29.09.23	Differentiation of a vector
	30.09.23	Gradient of a scalar and its physical significance
8.	02.10.23	Mahatma Gandhi Jayanti
	03.10.23	Triintegration of a vector
	04.10.23	Grass's divergence theorem
	05.10.23	Stokes theorem
	06.10.23	Derivation of field $E$ from potential as gradient
	07.10.23	Derivation of Laplace and Poisson Eqn.
	09.10.23	Electric flux
9	10.10.23	Gauss's law and its app <sup>n</sup> to spherical shell
	11.10.23	Uniformly charged infinite plane
	12.10.23	Uniformly charged straight wire
	13.10.23	Mechanical force of charged surface
	14.10.23	Energy per unit volume
	16.10.23	Open Test
10.	17.10.23	Unit - III, Introduction, Magnetic Induction
	18.10.23	Magnetic flux, solenoidal nature of vector, Faraday induction
	19.10.23	Properties of $\nabla \times \vec{B} = \mu_0 \vec{j}$ and $\nabla \times \vec{E} = -\dot{\vec{B}}$
	20.10.23	Electromotive theory of dia
	21.10.23	Para magnetism (Langevin's theory)
	23.10.23	Domain theory of ferromagnetism
	24.10.23	Diamagnetism
11.	25.10.23	Cycle of magnetisation
	26.10.23	Hysteresis loop (Energy dissipation)
	27.10.23	Hysteresis loss
	28.10.23	Maharshi Vaidiki Jayanti
	30.10.23	Importance of hysteresis curve
	31.10.23	Revision
12	01.11.23	Harina Day
	02.11.23	Revision
	03.11.23	Test
	04.11.23	Unit - III, Introduction, E.M. theory
	06.11.23	Maxwell eqn
13	07.11.23	Maxwell eqn derivation
	08.11.23	Displacement current



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 Class and Section: BSc 1st Year (I<sup>st</sup> Sem)  
 Subject: PHYSICS

Week	Date	Topics
	09.11.23	Vector and scalar products
	10.11.23	Differential Calculus
	11.11.23	do
14	13.11.23	Differential Calculus
	14.11.23	do
	15.11.23	do
	16.11.23	do
	17.11.23	Boundary conditions at interface between two dielectric media
	18.11.23	Repeat
15	20.11.23	Propagation of EM wave
	21.11.23	Pointing Vectors
	22.11.23	Pointing Vectors
	23.11.23	Revision
	24.11.23	do
	25.11.23	do
16	27.11.23	Cricket Match Duv Jayanti
	28.11.23	do
	29.11.23	do
	30.11.23	Test