

LESSON PLAN

PHYSICS

Name of the Assistant Professor: Sundeep Kumar

Class and Section: B.Sc 2nd Sem (PHYSICS)

Subject Lesson Plan: 16 Weeks (from 21/03/2022 to 10/07/2022)

Total Working days: 92 days

Week 1
Chapter: B.Sc 2nd Sem : Elasticity
Week 1 Day 1 Date : 21/03/2022 B.Sc 2nd Sem: Rigid body, Perfectly elastic body , perfectly plastic body, stress and its type.
Week 1 Day 2 Date : 22/03/2022 B.Sc 2nd Sem: Strain and its types, Hook's law
Week 1 Day 3 Date : 23/03/2022 Holiday : Shahidi Diwas
Week 1 Day 4 Date : 24/03/2022 B.Sc 2nd Sem:, type of elasticity, Poisson's ratio ,
Week 1 Day 5 Date : 25/03/2022 B.Sc 2nd Sem: energy of strained body ,
Week 1 Day 6 Date : 26/03/2022 B.Sc 2nd Sem: Relation between elastic constants
Week 2
Chapter: B.Sc 2nd Sem : Elasticity
Assignments: Strain and its types, Hook's law
Week 2 Day 1 Date : 28/03/2022 B.Sc 2nd Sem: Torsion of cylinder and twisting couple
Week 2 Day 2 Date : 29/03/2022 B.Sc 2nd Sem: Bending of beam
Week 2 Day 3 Date : 30/03/2022 B.Sc 2nd Sem: Cantilevers
Week 2 Day 4 Date : 31/03/2022 B.Sc 2nd Sem:Centrally loaded beam
Week 2 Day 5 Date : 01/04/2022 B.Sc 2nd Sem: Short questions and numerical and take the problems
Week 3 Day 6 Date : 02/04/2022 B.Sc 2nd Sem: Take the test
Week 3
Chapter: B.Sc 2nd Sem Kinetic theory of gases
Assignments: Cantilevers
Week 3 Day 1 Date : 04/04/2022 B.Sc 2nd Sem: Assumptions of Kinetic Theory of gases
Week 3 Day 2 Date : 05/04/2022 B.Sc 2nd Sem: expression of pressure of gas
Week 3 Day 3 Date : 06/04/2022

B.Sc 2nd Sem: kinetic interpretation of temperature

Week 3 Day 4 Date : 07/04/2022

B.Sc 2nd Sem: Law of equipartition of energy and its applications for specific heats of gases.

Week 3 Day 5 Date : 08/04/2022

B.Sc 2nd Sem: Maxwell distribution of speeds and velocities (derivation required).

Week 3 Day 6 Date : 09/04/2022

B.Sc 2nd Sem: Experimental verification of Maxwell's Law of speed distribution most probable speed

Week 4

Chapter: B.Sc 2nd Sem Kinetic theory of gases

Assignments: Maxwell distribution of speeds and velocities (derivation required).

Week 4 Day 1 Date : 11/04/2022

B.Sc 2nd Sem: average and r.m.s. speed

Week 4 Day 2 Date : 12/04/2022

B.Sc 2nd Sem: mean free path,

Week 4 Day 3 Date : 13/04/2022

B.Sc 2nd Sem: Transport phenomena

Week 4 Day 4 Date : 14/04/2022

Holiday : Ambedkar Jayanti

Week 4 Day 5 Date : 15/04/2022

B.Sc 2nd Sem: transport of momentum .

Week 4 Day 6 Date : 16/04/2022

B.Sc 2nd Sem: transport of energy

Week 5

Chapter: B.Sc 2nd Sem Kinetic theory of gases

Assignments: Transport phenomena

Week 5 Day 1 Date : 18/04/2022

B.Sc 2nd Sem: transport of mass

Week 5 Day 2 Date : 19/04/2022

B.Sc 2nd Sem: brownian motion

Week 5 Day 3 Date : 20/04/2022

B.Sc 2nd Sem: Real gases

Week 5 Day 4 Date : 21/04/2022

B.Sc 2nd Sem: Van der Waal's equation

Week 5 Day 5 Date : 22/04/2022

B.Sc 2nd Sem: Short questions and numericals

Week 5 Day 6 Date : 23/04/2022

B.Sc 2nd Sem: take the test

Week 6

Chapter: B.Sc 2nd Sem : Theory of relativity

Assignments: Real gases & Van der Waal's equation

Week 6 Day 1 Date : 25/04/2022

B.Sc 2nd Sem: Define partical , events , observer

Week 6 Day 2 Date : 26/04/2022

B.Sc 2nd Sem: frame of reference, Inertial frame of reference, non-inertial frame of reference

Week 6 Day 3 Date : 27/04/2022

B.Sc 2nd Sem: variant quantities, invariant quantities

Week 6 Day 4 Date : 28/04/2022

B.Sc 2nd Sem: Measurement of length, measurement of velocity

Week 6 Day 5 Date : 29/04/2022

B.Sc 2nd Sem: measurement of acceleration.

Week 6 Day 6 Date : 30/04/2022

B.Sc 2nd Sem: conservation of momentum and conservation of energy

Week 7

Chapter: B.Sc 2nd Sem : Theory of relativity

Assignments: frame of reference, Inertial frame of reference, non-inertial frame of reference

Week 7 Day 1 Date : 02/05/2022

B.Sc 2nd Sem: Galilean transformation

Week 7 Day 2 Date : 03/05/2022

Holiday : Parshuram Jayanti

Week 7 Day 3 Date : 04/05/2022

B.Sc 2nd Sem: conservation of momentum and conservation of energy.

Week 7 Day 4 Date : 05/05/2022

B.Sc 2nd Sem: Michelson and Morley experiment.

Week 7 Day 5 Date : 06/05/2022

B.Sc 2nd Sem: special theory of relativity

Week 7 Day 6 Date : 07/05/2022

B.Sc 2nd Sem: Lorentz transformation

Week 8

Chapter: B.Sc 2nd Sem : Theory of relativity

Assignments: Michelson and Morley experiment.

Week 8 Day 1 Date : 09/05/2022

B.Sc 2nd Sem: length contraction

Week 8 Day 2 Date : 10/05/2022

B.Sc 2nd Sem: Time Dilation

Week 8 Day 3 Date : 11/05/2022

B.Sc 2nd Sem: Addition of Velocities.

Week 8 Day 4 Date : 12/05/2022

B.Sc 2nd Sem: Variation of Mass With Velocity

Week 8 Day 5 Date : 13/05/2022

B.Sc 2nd Sem: Relation between relativistic momentum and energy.

Week 8 Day 6 Date : 14/05/2022

B.Sc 2nd Sem: take the test.

Week 9

Chapter: B.Sc 2nd Sem : Electromagnetic Induction

Week 9 Day 1 Date : 16/05/2022

B.Sc 2nd Sem: Growth and decay of current in a circuit with (a) Capacitance and resistance circuit with (a)

Week 9 Day 2 Date : 17/05/2022 B.Sc 2nd Sem: (b) resistance and inductance
Week 9 Day 3 Date : 18/05/2022 B.Sc 2nd Sem: (c) Capacitance and inductance
Week 9 Day 4 Date : 19/05/2022 B.Sc 2nd Sem: (d) Capacitance resistance and inductance.
Week 9 Day 5 Date : 20/05/2022 B.Sc 2nd Sem: AC circuit analysis using complex variables with (a) capacitance and resistance
Week 9 Day 6 Date : 21/05/2022 B.Sc 2nd Sem: (b) resistance and inductance
Week 10
Chapter: B.Sc 2nd Sem : Electromagnetic Induction
Assignments: AC circuit analysis using complex variables with (a) capacitance and resistance
Week 10 Day 1 Date : 23/05/2022 B.Sc 2nd Sem:(c) capacitance and inductance
Week 10 Day 2 Date : 24/05/2022 B.Sc 2nd Sem: d) capacitance, inductance and resistance Series and parallel resonant circuit
Week 10 Day 3 Date : 25/05/2022 B.Sc 2nd Sem: Short questions and numericals
Week 10 Day 4 Date : 26/05/2022 B.Sc 2nd Sem: Take the test
Week 10 Day 5 Date : 27/05/2022 B.Sc 2nd Sem: Quality factor (Sharpness of resonance)
Week 10 Day 6 Date : 28/05/2022 B.Sc 2nd Sem: Take the problems
Week 11
Chapter: B.Sc 2nd Sem : Semiconductor Diodes
Assignments: Quality factor (Sharpness of resonance)
Week 11 Day 1 Date : 30/05/2022 B.Sc 2nd Sem:Energy bands in solids
Week 11 Day 2 Date : 31/05/2022 B.Sc 2nd Sem: Intrinsic and extrinsic semiconductor
Week 11 Day 3 Date : 01/06/2022 B.Sc 2nd Sem: Hall effect
Week 11 Day 4 Date : 02/06/2022 Holiday ; Maharana Pratap Jayanti
Week 11 Day 5 Date : 03/06/2022 B.Sc 2nd Sem: P-N junction diode and their V-I characteristic
Week 11 Day 6 Date : 04/06/2022 B.Sc 2nd Sem: Zener and avalanche breakdown
Week 12
Chapter: B.Sc 2nd Sem : Semiconductor Diodes
Assignments: P-N junction diode and their V-I characteristic

Week 12 Day 1 Date : 06/06/2022 B.Sc 2nd Sem:Resistance of a diode, Light Emitting diodes (LED)
Week 12 Day 2 Date : 07/06/2022 B.Sc 2nd Sem: Photo conduction in semiconductors,photodiode
Week 12 Day 3 Date : 08/06/2022 B.Sc 2nd Sem: Solar Cell
Week 12 Day 4 Date : 09/06/2022 B.Sc 2nd Sem: P-N junction half wave and full wave rectifier
Week 12 Day 5 Date : 10/06/2022 B.Sc 2nd Sem: Types of filter circuits (L and - with theory)
Week 12 Day 6 Date : 11/06/2022 B.Sc 2nd Sem: Zener diode as voltage regulator, simple regulated power supply
Week 13
Chapter: B.Sc 2nd Sem : Transistors
Assignments: Zener diode as voltage regulator, simple regulated power supply
Week 13 Day 1 Date : 13/06/2022 B.Sc 2nd Sem:Junction Transistors,Bipolar transistors
Week 13 Day 2 Date : 14/06/2022 B.Sc 2nd Sem: working of NPN and PNP transistors
Week 13 Day 3 Date : 15/06/2022 B.Sc 2nd Sem: Transistor connections (C-B, C-E, C-C mode)
Week 13 Day 4 Date : 16/06/2022 B.Sc 2nd Sem: constants of transistor
Week 13 Day 5 Date : 17/06/2022 B.Sc 2nd Sem: Transistor characteristic curves (excluding h parameter analysis),
Week 13 Day 6 Date : 18/06/2022 B.Sc 2nd Sem: advantage of C-B configuration
Week 14
Chapter: B.Sc 2nd Sem : Transistor Amplifiers
Assignments: working of NPN and PNP transistors
Week 14 Day 1 Date : 20/06/2022 B.Sc 2nd Sem:C.R. O. (Principle, construction and working in detail).
Week 14 Day 2 Date : 21/06/2022 B.Sc 2nd Sem: Transistor biasing
Week 14 Day 3 Date : 22/06/2022 B.Sc 2nd Sem: methods of Transistor biasing and stabilization
Week 14 Day 4 Date : 23/06/2022 B.Sc 2nd Sem: D.C. load line
Week 14 Day 5 Date : 24/06/2022 B.Sc 2nd Sem: Common-base and common-emitter transistor biasing
Week 14 Day 6 Date : 25/06/2022 B.Sc 2nd Sem: Common-base, common- emitter amplifiers
Week 15
Chapter: B.Sc 2nd Sem : Transistor Amplifiers
Assignments: Transistor biasing,Load line

Week 15 Day 1 Date : 27/06/2022 B.Sc 2nd Sem: Classification of amplifiers
Week 15 Day 2 Date : 28/06/2022 B.Sc 2nd Sem: Resistance-capacitance (R-C) coupled amplifier (two stage; concept of band width, no derivation)
Week 15 Day 3 Date : 29/06/2022 B.Sc 2nd Sem: Feed-back in amplifiers
Week 15 Day 4 Date : 30/06/2022 B.Sc 2nd Sem: advantage of negative feedback Emitter follower
Week 15 Day 5 Date : 01/07/2022 B.Sc 2nd Sem: Take the problems
Week 15 Day 6 Date : 02/07/2022 B.Sc 2nd Sem: take the test
Week 16
Chapter: B.Sc 2nd Sem : Oscillators
Assignments: Resistance-capacitance (R-C) coupled amplifier
Week 16 Day 1 Date : 04/07/2022 B.Sc 2nd Sem: Oscillators, Principle of Oscillation
Week 16 Day 2 Date : 05/07/2022 B.Sc 2nd Sem: , Classification of Oscillator
Week 16 Day 6 Date : 06/07/2022 B.Sc 2nd Sem: Condition for self sustained oscillation : Barkhausen Criterion for oscillations
Week 16 Day 6 Date : 07/07/2022 B.Sc 2nd Sem: . Tuned collector common emitter oscillator
Week 16 Day 6 Date : 08/07/2022 B.Sc 2nd Sem: Hartley oscillator
Week 16 Day 6 Date : 09/07/2022 B.Sc 2nd Sem: Colpitt's oscillator