


Lesson Plan (Even Semester, 2024)

Name of the Assistant / Associate Professor: Dr. PARAMJEET

Class and Section: B.Sc - Ist (1st Semester)

Subject: PHYSICS (SE)

Week	Date	Topics
1.	22 July to 27 July (2024)	Physics - Nature, scope & excitement. Major discoveries in physics Major contribution by Indian Physicists - Fundamental Physical Constants
2.	29 July to 03 August (2024)	Physics in relation to other sciences. Impact of physics on society & on latest developments in science and technology.
3.	05 August to 10 August (2024)	System of measuring units (Need of units) Measuring process, concept of mass, length and time Fundamental and derived units.
4.	12 August to 17 August (2024)	System of Units, with examples Concept of errors and types of errors (only Def'n) Accuracy and precision in measurements. Least count and application of measuring instruments: - Vernier, calliper, screw gauge.
5.	19 August to 24 August	Motion of objects in one-dimension. Position of the object, θ in 1-D. Origin / Reference point, frame of reference. Definition and examples of motion in 1-D, 2-D, 3-D Scalar and vector quantities.
6.	26 August to 31 August 1 st September	Description of motion along a straight-line Distance and Displacement. 1 st sessional Test and assignment Uniform-motion and non-uniform motion Average and instantaneous speed.
7.	2 nd September to 07-Sept.	Average and instantaneous velocity, acceleration Graphical analysis of straight-line motion - Distance-time graph.
8.	09-14 Sept.	Equation of motion and their applications. Cause of motion - concept of force. Newton's 1 st 2 nd 3 rd laws of motion.
9.	16-21 Sept.	Daily life applications of Newton's laws. Universal-law of Gravitation, and its application. Acceleration due to gravity.
10.	23-28 Sept.	2 nd - Sessional Test and Assignment.
	30-05 Oct.	Free-fall of a body, mass and weight
	07-12 Oct.	Thrust and pressure and its importance in life. Archimedes Principle
	14-19 Oct.	Work-energy, types of Energy (K.E & P.E)
	21-26 Oct.	Law of conservation of energy & its applications. Conservation of linear and angular momentum.
	04-09 Nov.	Collision (Elastic - Non-elastic). Concept of centre of mass, Physics behind cycling, rock climbing and skating.
	11-16 Nov.	
	18-22 Nov.	Revision of difficult topics


 20/07/2024


Lesson Plan (Even Semester, 2024)

Name of the Assistant / Associate Professor: Dr. PARAMJEET

Class and Section: B.Sc - IIIrd (5th Semester)

Subject: PHYSICS (Solid-State)

Week	Date	Topics
1.	22-27 July (2024)	Crystalline and Coloursy forms with examples Liquid crystals and their properties.
	29-July to	Crystal structure and periodicity.
2.	03-Aug.	Crystal lattice and basis with examples. Crystal translational vectors and axes. Unit cells with examples.
	5-10 Aug.	Primitive cell Wigner-Seitz primitive cell
3.	12-17 Aug.	Symmetry operations for 2-D crystal structures. Bravais - Lattice in two dimensions.
	19-24 Aug.	" " " " three " " Crystal planes and miller indices.
	26-31 Aug.	Interplaner - spacing and it's derivation.
4.	2-7 Sept.	Crystal-structure of Zinc sulphide " " " " Sodium chloride (1 st session)
	9-14 Sept.	" " " " Diamond structure. X-ray diffraction and it's derivation.
	16-21 Sept.	Bragg's Law of X-ray diffraction method. k-space with examples.
5.	23-28 Sept.	Reciprocal Lattice and it's examples. Physical significance of Reciprocal lattice. Reciprocal-Lattice vectors
6.	3-05 Oct.	1 st sessional Test and assignment Reciprocal-lattice vectors of Simple cubic structure
	7-12 Oct.	" " " " BCC " " " " " " FCC "
7.	14-19 Oct.	Specific heat of solids (Introduction) Classical - models of specific heat of solids. Einstein's theory of " " " "
	21-26 Oct.	Debye's Model " " " " Analysis of Debye's model " " " " Problems related to specific heat of solids.
8.	04-09 Nov.	Revision of 6 Difficult - topics.
9.	11-16 Nov.	2 nd sessional-Test and Assignment.
	18-22 Nov.	Revision of Difficult - topics.
10.		


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