Physics by fiziks

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"Discipline is the Bridge between Goal and Success"

Study Plan of Condensed Matter Physics for Pre-recorded Batches

(For NET-JRF, GATE, JEST, TIFR Aspirant and M.Sc Students)

Days	Enter Your Dates	Topics Name :
		8. Condensed Matter Physics
Day 1		Lecture 1: Intorduction of Condensed Matter Physics (Condensed Matter Physics)
		Lecture 2: Space Lattice and Unit cell (Condensed Matter Physics)
Day 2		Lecture 3: Basis and Bravais lattice (Condensed Matter Physics)
		Lecture 4: Line Indices (Condensed Matter Physics)
Day 3		Lecture 5: Miller Indices Part-1 (Condensed Matter Physics)
		Lecture 6: Miller Indices Part-2 (Condensed Matter Physics)
Day 4		Lecture 7: Problem on Miller Indices (Condensed Matter Physics)
		Lecture 8: Planar and Crystal Density (Condensed Matter Physics)
Day 5		Lecture 9: Packing Fraction of SC & BCC (Condensed Matter Physics)
		Lecture 10: Packing fraction of HCP (Condensed Matter Physics)
Day 6		Lecture 11: Packing Fraction of Diamond Cubic (Condensed Matter Physics)
		Lecture 12: NaCl and CsCl Structure (Condensed Matter Physics)
		Class Test 1: Crystal Structure (Condensed Matter Physics)
Day 7		Lecture 13: X-ray Diffraction (Condensed Matter Physics)
		Lecture 14: Crystal Structure Factor (Condensed Matter Physics)
Day 8		Lecture 15: Braggs Law Part-1 (Condensed Matter Physics)
		Lecture 16: Braggs Law Part-2 (Condensed Matter Physics)
Day 9		Lecture 17: Reciprocal Lattice Part-1 (Condensed Matter Physics)
		Lecture 18: Reciprocal Lattice Part-2 (Condensed Matter Physics)
		Class Test 2: XRD and Reciprocal Lattices (Condensed Matter Physics)
Day 10		Lecture 19: Density of state Part-1 (Condensed Matter Physics)
		Lecture 20: Density of state Part-2 (Condensed Matter Physics)
Day 11		Lecture 21: Lattice Vibration of 1D Monoatomic Lattice Part-1 (Condensed Matter Physics)
		Lecture 22: Lattice Vibration of 1D Monoatomic Lattice Part-2 (Condensed Matter Physics)
Day 12		Lecture 23: Lattice Vibration of 1D Diatomic Lattice Part-1 (Condensed Matter Physics)
		Lecture 24: Lattice Vibration of 1D Diatomic Lattice Part-2 (Condensed Matter Physics)
Day 13		Lecture 25: Lattice Vibration Assignment-3 discussion (Condensed Matter Physics)
		Lecture 26: Modes of Vibration (Condensed Matter Physics)
		Class Test 3: Lattice Vibrations (Condensed Matter Physics)
Day 14		Lecture 27: Concept of Specific Heat of Solid (Condensed Matter Physics)
		Lecture 28: Dulong and Petit Law (Condensed Matter Physics)
Day 15		Lecture 29: Einstein Theory of Specific Heat (Condensed Matter Physics)
		Lecture 30: Debye Theory of Specific Heat (Condensed Matter Physics)
		Class Test 4: Specific Heat of Solid (Condensed Matter Physics)
Day 16		Lecture 31: Free Electron Theory (Condensed Matter Physics)
		Lecture 32: Specific Heat of Metal (Condensed Matter Physics)
Day 17		Lecture 33: Drude Model of Electrical Conductivity (Condensed Matter Physics)
		Lecture 34: Hall Effect (Condensed Matter Physics)
		Class Test 5: Free Electron Theory (Condensed Matter Physics)

Study Plan of Condensed Matter Physics for Pre-recorded Batches		
Day 18		Lecture 35: Band Theory of Solid-Classification of Solids (Condensed Matter Physics)
		Lecture 36: Band Theory of Solid- Kronig Penny Model (Condensed Matter Physics)
Day 19		Lecture 37: Band-Theory of Solid-Brillouin Zone (Condensed Matter Physics)
		Lecture 38: Band theory of solid-Effective Mass of Electron (Condensed Matter Physics)
Day 20		Lecture 39: Band theory of solid-Tight Binding Method (Condensed Matter Physics)
		Lecture 40: Band theory of solid-question discussion (Condensed Matter Physics)
		Class Test 6: Band Theory of Solid (Condensed Matter Physics)
Day 21		Lecture 41: Introduction to Semiconductor Physics (Condensed Matter Physics)
		Lecture 42: Semiconductor Physics-Direct and Indirect Band Gap (Condensed Matter Physics)
Day 22		Lecture 43: Electron and Hole Concentration in Intrinsic Semiconductor (Condensed Matter Physics)
		Class Test 7: Semiconductor Physics (Condensed Matter Physics)
Day 23		Lecture 44: Donor Levels in Extrinsic Semiconductor (Condensed Matter Physics)
		Lecture 45: Fermi Level in n-type Semiconductor (Condensed Matter Physics)
Day 24		Lecture 46: Conducivity of Extrinsic Semiconductor (Condensed Matter Physics)
		Lecture 47: Problem Discussion of Semiconductor Physics (Condensed Matter Physics)
Day 25		Lecture 48: Superconductivity Part-1 (Condensed Matter Physics)
		Lecture 49: Superconductivity Part-2 (Condensed Matter Physics)
Day 26		Lecture 50: Superconductivity Part-3 (Condensed Matter Physics)
		Lecture 51: Superconductivity Part-4 (End of Condensed Matter Physics)
		Class Test 8: Superconductor (Condensed Matter Physics)
		GATE-Magnetism and Dielectric
Day 27		Lecture 1-Introduction of Magnetism in Solid and Diamagnetism
		Lecture 2-Paramagnetism in Solid
Day 28		Lecture 3-Ferromagnetism in solid
		Lecture 4-AntiFerromagnetism and Ferri-magnetism in solid
Day 29		Lecture 5-Dielectric Properties of Solid Part-1
		Lecture 6-Dielectric Properties of Solid Part-2