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Study Plan of Thermodynamics and Statistical Physics for Pre-recorded Batches

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

Days	Enter Your Dates	Topics
		PART-A: Thermodynamics
Day: 1		Lecture 1: Kinetic Theory of Gases Part-1
		Lecture 2: Kinetic Theory of Gases Part-2
Day: 2		Lecture 3: Kinetic Theory of Gases & Degree of Freedom
		Lecture 4: Real Gases
		Lecture 5: Problems on Kinetic Theory of Gases
		Solve Assignment No. 1: Kinetic Theory of gases (Lect-1 to Lect-5)
Day: 3		Lecture 6: Density of States Part-1
		Lecture 7: Density of States Part-2
Day: 4		Lecture 8: M.B. Probability Distribution Part-1
		Lecture 9: M.B. Probability Distribution-Part-2
Day: 5		Lecture 10: Maxwell Boltzmann In 1D
		Lecture 11: Problems on M.B.
Day: 6		Solve Assignment No. 2: M.B. Probability Distribution (Lect-6 to Lect-11)
Day: 7		Class Test 1: KTG and MB (Lect-1 to Lect-11)
Day: 8		Lecture 12: First Law Of Thermodynamics
		Lecture 13: Work Done In Various Processes
		Lecture 14: Problems On First Law of Thermodynamics
		Solve Assignment No. 3: First of Law of Thermodynamics (Lect-12 to Lect-14)
Day: 9		Lecture 15: Second Law of Thermodynamics
		Lecture 16: Carnot Engine
Day: 10		Lecture 17: Entropy
		Lecture 18: Problems on Entropy
		Solve Assignment No. 4: Second of Law of Thermodynamics (Lect-15 to Lect-18)
Day: 11		Lecture 19: Maxwells Relations and Thermodynamic Potential
		Lecture 20: TdS Equations
Day: 12		Lecture 21: Energy Equations Problems
		Lecture 22: Maxwell Relations Potential Problems
		Lecture 23: Previous Year Problems on Thermodynamics
		Solve Assignment No. 5: Thermodynamics potential (Lect-9 to Lect-23)
Day: 13		Class Test 2: 1st and 2nd Law of Thermodynamics (Lect-12 to Lect-18)
Day: 14		Class Test 3: Thermodynamic Potential (From Lecture 19 - Lecture 23)

Days	Enter Your Dates	Topics
		PART-B: Statistical Mechanics
Day: 15		Lecture 24: Introduction to Statistical Methods Probability Considerations Part-1
		Lecture 25: Introduction to Statistical Methods Probability Considerations Part-2
Day: 16		Lecture 26: Random Walk Problem in 1D
		Lecture 27: Ensembles
		Solve Assignment No. 6: Probability Distribution (Lect-24 to Lect-26)
Day: 17		Lecture 28: Microcanonical Ensemble Part-1
		Lecture 29: Microcanonical Ensemble Part-2
		Solve Assignment No. 7: Microcanonical Ensemble (Lect-27 to Lect-28)
Day: 18		Lecture 30: Canonical Derivations
		Lecture 31: Canonical Discret Systems Harmonic Oscillator
Day: 19		Lecture 32: Canonical Magnetic Systems
		Lecture 33: Canonical Continuous System
Day: 20		Revision
Day: 21		Class Test 4: Lect-24 to Lect-28
Day: 22		Lecture 34: Canonical Linear Potential
		Lecture 35: Canonical Relativistic
Day: 23		Lecture 36: Canonical Rigid Rotor and Langevin Theory
		Lecture 37: Problems on Canonical
		Solve Assignment No. 8: Canonical Ensemble (Lect-29 to Lect-37)
Day: 24		Lecture 38: Grand Canonical Part-1
		Lecture 39: Grand Canonical Part-2
		Solve Assignment No. 9: Grand Canonical Ensemble (Lect-38 to Lect-39)
Day: 25		Lecture 40: First Order Phase Transition
		Lecture 41: Second Order Phase Transition Ising Model
		Solve Assignment No. 10: First Order Phase Transition (Lect-40)
		Solve Assignment No. 11: Ising Model (Lect-41)
Day: 26		Lecture 42: Gas to Liquid Phase Transition
		Lecture 43: Problems on Gas to Liquid Phase Transition
Day: 27		Solve Assignment No. 12: Landeau Model (Lect-42 to Lect-43)
Day: 28		Class Test 5: Canonical Partition Function (Lect-29 to Lect-37)
Day: 29		Lecture 44: Non Equilibrium Statistical Mechanics
		Solve Assignment No. 13: Fluctuation and Non Equilibrium (Lect-44)
Day: 30		Lecture 45: Fermi Dirac Distribution
		Lecture 46: Fermi Gas Strongly Degenerate
Day: 31		Lecture 47: Bose Einstein Distribution
		Lecture 48: Black Body Radiation
		Solve Assignment No. 14: Identical Particles (Lect-45 to Lect-48)
Day: 32		Class Test 6: Lect-38 to Lect-44
Day: 33		Class Test 7: Lect-45 to Lect-48