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Study Plan of Quantum Mechanics for Pre-recorded Batches

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

Days	Enter Your Dates	Topics no.- 4. Quantum Mechanics
DAY 1		Lecture 1: Origin of Quantum Mechanics Part -1 (Quantum Mechanics)
		Lecture 2: Origin of Quantum Mechanics Part-2 (Quantum Mechanics)
DAY 2		Lecture 3: Blackbody Radiation Part-1 (Quantum Mechanics)
		Lecture 4: Blackbody Radiation Part-2 (Quantum Mechanics)
DAY 3		Lecture 5 Planck's Theory of Black Radiation Part-1 (Quantum Mechanics)
		Lecture 6: Photoelectric effect Part-1 (Quantum Mechanics)
DAY 4		Lecture 7: Photoelectric effect Part-2 (Quantum Mechanics)
		Lecture 8: De-Broglie's Hypothesis & Matter Waves (Quantum Mechanics)
DAY 5		Lecture 9: Davisson Germer Experiment (Quantum Mechanics)
		Lecture 10: Wave Function (Quantum Mechanics)
DAY 6		Lecture 11: Wave Packet and Group velocity (Quantum Mechanics)
		Lecture 12: Question Discussion (Quantum Mechanics)
DAY 7		Lecture 13: Wave Packet Group Velocity (Quantum Mechanics)
		Lecture 14: Wave Function Part 1 (Quantum Mechanics)
DAY 8		Lecture 15: Wave Function Part 2 (Quantum Mechanics)
		Lecture 16: Heisenberg Uncertainty Principle Part 1 (Quantum Mechanics)
DAY 9		Lecture 17: Heisenberg Uncertainty Principle Part 2 (Quantum Mechanics)
		Lecture 18: Assignment Discussion - 1A Part 2 (Quantum Mechanics)
DAY 10		Lecture 19: Assignment Discussion - 1A Part 2 (Quantum Mechanics)
		Lecture 20: Transform of Wave Function In Different Space (Quantum Mechanics)
		Class Test 1: Wave-Particle Duality & Uncertainty Principle (Quantum Mechanics)
DAY 11		Lecture 21: Schrodinger Wave Equation Part 1 (Quantum Mechanics)
		Lecture 22: Schrodinger Wave Equation Part 2 (Quantum Mechanics)
DAY 12		Lecture 23: Linear Algebra & Hilbert Space Part 1 (Quantum Mechanics)
		Lecture 24: Linear Algebra & Hilbert Space Part 2 (Quantum Mechanics)
DAY 13		Lecture 25: Basis Vectors (Quantum Mechanics)
		Class Test 2: Tools of Quantum Mechanics Part - 1 (Quantum Mechanics)
DAY 14		Lecture 26: Linear Transformation & Operators Part 1 (Quantum Mechanics)
		Lecture 27: Linear Transformation & Operators Part 2 (Quantum Mechanics)
DAY 15		Lecture 28: Linear Transformation & Operators Part 3 (Quantum Mechanics)
		Lecture 29: Hermitian Operator (Quantum Mechanics)
DAY 16		Lecture 30 Eigen Values & Eigen Vectors (Quantum Mechanics)
		Lecture 31 Doubt Discussion of Class Test Part -1 (Quantum Mechanics)
DAY 17		Lecture 32 Doubt Discussion of Class Test Part -2 (Quantum Mechanics)
		Lecture 33 Matrix Formulation of Quantum Mechanics (Quantum Mechanics)
		Class Test 3: Tools of Quantum Mechanics Part -2 (Quantum Mechanics)
DAY 18		Lecture 34: Commutator Bracket (Quantum Mechanics)
		Lecture 35: Commutator Algebra (Quantum Mechanics)
DAY 19		Lecture 36: Unitary Operator (Quantum Mechanics)
		Lecture 37: Unitary Transformation (Quantum Mechanics)
DAY 20		Lecture 38: Translational Operator (Quantum Mechanics)
		Lecture 39: Discussion of Previous Year Question (Quantum Mechanics)
DAY 21		Lecture 40: Postulates of Quantum Mechanics (Quantum Mechanics)
		Lecture 41: Time Evolution of States Part-1 (Quantum Mechanics)
DAY 22		Lecture 42: Time Evolution of States Part-2 (Quantum Mechanics)
		Lecture 43: Ehrenfest Theorem (Quantum Mechanics)

DAY 23		Lecture 44: Discussion of Assignment (Quantum Mechanics)
		Lecture 45: Time Independent Schrodinger Equation of Stationary States (Quantum Mechanics)
		Class Test 4: Postulates of Quantum Mechanics (Quantum Mechanics)
DAY 24		Lecture 46: Free Particle (Quantum Mechanics)
		Lecture 47: Infinite Square Well Potential Part 1 (Quantum Mechanics)
DAY 25		Lecture 48: Infinite Square Well Potential Part 2 (Quantum Mechanics)
		Lecture 49: Finite Potential Well (Quantum Mechanics)
DAY 26		Lecture 50: Finite Square Potential Well Part -1 (Quantum Mechanics)
		Lecture 51: Finite Square Potential Well Part -2 (Quantum Mechanics)
DAY 27		Lecture 52: Finite Negative Potential Well (Quantum Mechanics)
		Lecture 53: Step Potential Part 1 (Quantum Mechanics)
DAY 28		Lecture 54: Step Potential Part 2 (Quantum Mechanics)
		Lecture 55: Potential Barrier And Tunneling (Quantum Mechanics)
		Class Test 5: Free Particle, Potential barriers and Potential Well (Quantum Mechanics)
DAY 29		Lecture 56: Quantum Harmonic Oscillator Part 1 (Quantum Mechanics)
		Lecture 57: Quantum Harmonic Oscillator Part 2 (Quantum Mechanics)
DAY 30		Lecture 58: Quantum Harmonic Oscillator Part 3 (Quantum Mechanics)
		Lecture 59: Quantum Harmonic Oscillator Part 4 (Quantum Mechanics)
DAY 31		Lecture 60: Assignment Discussion No. 3 (Quantum Mechanics)
		Lecture 61: Quantum Harmonic Oscillator Part 5 (Quantum Mechanics)
DAY 32		Lecture 62: Dirac Delta Potential Part-1 (Quantum Mechanics)
		Lecture 63: Dirac Delta Potential Part-2 (Quantum Mechanics)
DAY 33		Lecture 64: 3D Infinite Potential Well (Quantum Mechanics)
		Lecture 65 3D Harmonic Oscillator (Quantum Mechanics)
		Class Test 6: (1D Harmonic Oscillator, Dirac Function and 2D, 3D in Cartesian Coordinate) (Quantum Mechanics)
DAY 34		Lecture 66 Angular Momentum Part-1 (Quantum Mechanics)
		Lecture 67 Angular Momentum Part-2 (Quantum Mechanics
DAY 35		Lecture 68 Angular Momentum Part-3 (Quantum Mechanics)
		Lecture 69 Angular Momentum Part-4 (Quantum Mechanics)
DAY 36		Lecture 70: Angular Momentum Part-5 (Quantum Mechanics)
		Lecture 71: Angular Momentum Part-6 (Quantum Mechanics)
DAY 37		Lecture 72: Electron spin stern gerlach experiment (Quantum Mechanics)
		Lecture 73: Spin Angular Momentum (Quantum Mechanics)
DAY 38		Lecture 74: Questions on Angular Momentum (Quantum Mechanics)
		Lecture 75: Questions on Angular Momentum (Quantum Mechanics)
DAY 39		Lecture 76: Magnetic Moments (Quantum Mechanics)
		Lecture 77: Hydrogen-Atom Part-1 (Quantum Mechanics)
DAY 40		Lecture 78: Hydrogen-Atom Part-2 (Quantum Mechanics)
		Lecture 79: Hydrogen-Atom Part-3 (Quantum Mechanics)
DAY 41		Lecture 80: Hydrogen-Atom Part-4 (Quantum Mechanics)
		Class Test 7: Angular Momentum, Hydrogen Atom and Spin (Quantum Mechanics)
DAY 42		Lecture 81: Approximation Methods For Stationary States (Quantum Mechanics)
		Lecture 82: Perturbation Theory Part -1 (Quantum Mechanics)
DAY 43		Lecture 83: Perturbation Theory Part-2 (Quantum Mechanics)
		Lecture 84: Degenerate Perturbation Theory (Quantum Mechanics)
DAY 44		Lecture 85: Question of Degenerate (Quantum Mechanics)
		Lecture 86: Variational Method of Approximation (Quantum Mechanics)
DAY 45		Lecture 87: WKB Aproximation Part-1 (Quantum Mechanics)
		Lecture 88: WKB Aproximation Part-2 (Quantum Mechanics)
		Class Test 8: Approximation Method (Quantum Mechanics)
DAY 46		Lecture 89: Scattering Theory Part -1 (Quantum Mechanics)
		Lecture 90: Scattering Theory Part -2 (Quantum Mechanics)
DAY 47		Lecture 91: Scattering Theory Part-3 (Quantum Mechanics)
		Lecture 92: Elastic Scattering (Quantum Mechanics)

DAY 48		Lecture 93: Boom Approximation (Quantum Mechanics)
		Lecture 94: Partial Wave Analysis (Quantum Mechanics)
DAY 49		Lecture 95: Relativity Quantum Mechanics (Quantum Mechanics)
		Lecture 96: Dirac Relativistic Equation (Quantum Mechanics)
DAY 50		Lecture 97: Dirac Relativistic Energy (Quantum Mechanics)
		Lecture 98: Identical Particles Part -1 (Quantum Mechanics)
DAY 51		Lecture 99: Identical Particles Part -2 (End of Quantum Mechanics)
		Class Test 9: Scattering, Identical particles and Relativistic (Quantum Mechanics)