Physics by fiziks

Now at your home

"Discipline is the Bridge between Goal and Success"

Study Plan of Classical Mechanics for Pre-recorded Batches

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

Days	Enter Your Dates	Topics
		PART-A: Classical Mechanics
Day: 1		Lecture 1: Introduction of Classical Mechanics
		Lecture 2: Coordinate System and Degree of Freedom
Day: 2		Lecture 3: Generalised Coordinates and Basic Problems on Degree of Freedom
		Lecture 4: Lagrangian Formulation
Day: 3		Lecture 5: Problem on Lagrangian Part-1
		Lecture 6: Problem on Lagrangian Part-2
Day: 4		Lecture 7: Problem on Lagrangian Part-3
		Lecture 8: Hamiltonion Formulation
		Solve Assignment No. 1: Langragian & Hamiltonian (Lect-1 to Lect-8)
Day: 5		Lecture 9: Poission Bracket
		Lecture 10: Time Evolution of Physical Quantity
Day: 6		**Revision and Practice**
Day: 7		**Class Test 1: Lagrangian and Hamiltonian (Lect-1 to Lect-8)**
Day: 8		Lecture 11: Canonical Transformation and Generating Function Part-1
		Lecture 12: Canonical Transformation and Generating Function Part-2
		Solve Assignment No. 2: Poisson Bracket (Lect-9 to Lect-12)
Day: 9		Lecture 13: Stability Analysis
		Lecture 14: Phase Curve
		Solve Assignment No. 3: Stability Analysis and Phase Space (Lect-13 to Lect-14)
Day: 10		Lecture 15: Small Oscillation in One-Dimension
		Lecture 16: Action Angle Variable
Day: 11		Lecture 17: Small Oscillation
		Lecture 18: Small Oscillation Problem Part-1
Day: 12		Lecture 19: Small Oscillation Problem Part-2
		Lecture 20: Properties of Central Force
		Solve Assignment No. 4: Small Oscillation (Lect-15 to Lect-19)
Day: 13		**Class Test 2: Poission Bracket (Lect-9 to Lect-12)**
Day: 14		**Class Test 3: Small Oscillations & Phase Curve (Lect-13 to Lect-19)**
Day: 15		Lecture 21: Application of Effective Potential
		lecture 22: Differential Equation of Orbit
Day: 16		Lecture 23: Kepler's Problem
		Lecture 24: Kepler's Law
Day: 17		Lecture 25: Problems on Central Forces
		Lecture 26: Newton's Laws Part-1
Day: 18		Lecture 27: Newton's Laws Part-2
		Lecture 28: Variable Mass
Day: 19		Lecture 29: Collision
		Lecture 30: Centre of Mass
Day: 20		**Solve Assignment No. 5: Two Body Central Force Problems (Lect-20 to Lect-30)**
Day: 21		**Class Test 4: Central Force (Lect- 20 to Lect-30)**
Day: 22		Lecture 31: Moment of Inertia
		Lecture 32: Problems on Moment of Inertia

Day: 23		Lecture 33: Moment of Inertia Tensor
		Lecture 34: Problem on Moment of Inertia Tensor
		Solve Assignment No. 6: Moment of Inertia (Lect-31 to Lect-34)
Day: 24		Lecture 35: Rotation Frame of Refernece
		Lecture 36: Rotational Dynamics
Day: 25		Lecture 37: Problem on Rotational Dynamics
		Solve Assignment No. 7: Conservation of Angular Momentum (Lect-35 to Lect-37)
Day: 26		**Revision and Practice**
Day: 27		**Class Test 5: Moment of Inertia and Rotational Dynamics (Lect-31 to Lect-37)**
PART-B: Special Theory of Relativity		
Day: 28		Lecture 38: Special Theory of Relativity Part-1
		Lecture 39: Special Theory of Relativity Part-2
Day: 29		Lecture 40: Relative Velocity Theory and Basic
		Lecture 41: Problem on Relative Speed
Day: 30		Lecture 42: Length Contraction
		Lecture 43: Time Dialation
		Solve Assignment No. 8: Special Theory of Relativity (Lect-38 to Lect-43)
Day: 31		Lecture 44: Loss of Simulataneity
		Lecture 45: Relativistic Mass Part-1
Day: 32		Lecture 46: Relativitstic Mass Part-2
		Lecture 47: Special Four Vectors
		Lecture 48: Relativistic Electrodynamics
Day: 33		**Solve Assignment No. 9: Special Theory of Relativity (Lect-44 to Lect-47)**
Day: 34		**Class Test 6: Special Thoery of Relativity (Lect-38 to Lect-47)**