Cohen Tannoudji Quantum Mechanics Solutions Manual

SEMESTER-1
TOPICS TO BE COVERED: CLASSICAL MECHANICS, EXPERIMENTAL PHYSICS,
MATHEMATICAL PHYSICS, ATOMIC AND MOLECULAR PHYSICS
LAB: BASIC PHYSICS LABORATORY-I

CLASSICAL MECHANICS

Lagrangian formulation: Generalized coordinates, Lagrange's equations of motion, cyclic coordinates, integrals of motion, Jacobi integrals, energy conservation, symmetry, Galilean invariance.   15hrs

Hamiltonian formulation: conservative systems, Hamilton's function and Hamilton's equation of motion, phase space, Poisson brackets   10hrs

Hamilton-Jacobi Theory: action-angle variables, Liouville's theorem, examples.   7hrs

Variational principle: variational principle, applications, shortest distance problem, brachistrochrone.   9hrs

Rotational motion: Rotating frame of reference, inertial forces in rotating frames, effects of coriolis force, Foucalt's pendulum, Larmor's precession

                                                                                                                                11hrs

Central force: Two body central force problem, Kepler's problems, virial theorem   8hrs

Reference Books :

1. Classical Mechanics by H.Goldstein, Narosa Publishing Home,, New Delhi.
2. Classical Dynamics of Particles and Systems by Marion and Thomtron, Third Edition, Horoloma Book Jovanovich College Publisher.
3. Classical Mechanics by P.V.Panat, Narosa Publishing Home,, New Delhi.
4. Classical Mechanics by N.C.Rana and P.S.Joag, Tata Mc-Graw Hill Publishing Company Limited, New Delhi.
5. Introduction to Classical Mechanics by R.G.Takawale and P.S.Puranik, Tata Mc-Graw Hill Publishing Company Limited, New Delhi.
6. Classical Mechanics by J.C.Upadhyaya, Himalaya Publishing House.

Preface. Why do we need another book on quantum mechanics? ... In my case, I very much like CohenTannoudji's two-volume text, although Merzbach, ... The majority of leading texts focus upon the solution of Schr'odinger's equation for a handful of solvable problems. ... A solutions manual is also available for download.

624b518f5d