AS123 MECHANICS - I (3-0-0)

Statics

MODULE - I (Force Analysis)

Principles of Statics, Equilibrium of concurrent forces in a plane, Plane Trusses: Method of Joints, Method.

MODULE II - (Centre of Gravity)

Centre of Parallel Forces in a plane, Centre of gravity, Centroids of composite Plane Figures, Centroids of curves, Distributed force in a plane.

Dynamics

MODULE - III (Kinematics)

Rectilinear Translation: Kinematics of rectilinear motion, Principles of dynamics, Differential equation of rectilinear motion, Force as a function of time, Force proportional to displacement,

MODULE - IV

D'Alembert's Principles, Momentum and Impulse, Work and Energy, Conservation of Energy, Impact.

Textbooks:

Engineering Mechanics by: S. Tuimoshenko, D.H. Young, Mc-Graw Hill International Edition
Chapters: 1 ,2,
& 6.

Reference Book:

(1) Fundamentals of Engineering Mechanics, Second Edition, Publisher: Vikas Publishing House Pvt. Ltd. by S. Rajashekharan and G. Sankara Subhramanian.
(2) Engineering Mechanics, K. L. Kumar, TMH