

SARDAR PATEL UNIVERSITY
Programme & Subject: B.Sc (Mathematics)
Semester: V
Syllabus with Effect from: June-2013

Paper Code: US05CMTH06	Total Credit: 3
Title Of Paper: Mechanics - II	

Unit	Description in detail	Weighting (%)
I	Ingredients of mechanics , position vector , velocity vector , acceleration vector , gradient vector , Fundamental laws of Newtonian mechanics; the theory of dimensions;	
II	Plane statics; equilibrium of a particle , equilibrium of systems of particles , moment of force about a line , necessary and sufficient condition for equilibrium.	
III	Couples; work and potential energy; principle of virtual work , application; in plane statics , mass center and center of gravity , gravitational potential .	
IV	Flexible cables , cable in contact with smooth and rough curve plane Kinematics , kinematics of a particle , motion of a rigid body parallel to a plane.	

Recommended Texts :

- J.L.Synge and B.A.Griffith , Principles of Mechanics

Basic Text & Reference Books:-

- P.N.Chatterjee, Statics and Dynamics.

