SARDAR PATEL UNIVERSITY
Programme & Subject: M.Sc (Mathematics)
Semester: IV
Syllabus with Effect from: November-2013

Paper Code: PS04EMTH20	**Total Credit: 4**
Title Of Paper: Orbital Mechanics	

Unit	Description in detail	Weighting (%)
I	Basic formulae of spherical geometry and spherical trigonometry. Celestial sphere and displacement of a star on celestial sphere.	25%
II	The many-body problem formulation and integrals, Two body problem, constants of integration of the two body problem.	25%
III	The elliptic, parabolic and hyperbolic orbits, orientation of conic orbits in space, time equations, orbit elements, heliocentric and geocentric systems.	25%
IV	The topocentric system, time. Orbit determination, a self-adjective method, orbit element sensitivity	25%

Basic Text & Reference Books:-

- Franz T.Geyling and Robert Westerman, Introduction to orbital mechanics, Addison Wesley Publ. Co.