

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

<b>Paper Code: PS03EMTH06</b>	<b>Total Credit: 4</b>
<b>Title Of Paper: Geometric Topology: Homotopy, Triangulations &amp; Surfaces</b>	

<b>Unit</b>	<b>Description in detail</b>	<b>Weighting (%)</b>
I	Identification spaces: examples, quotients, topological groups, orbit spaces.	25%
II	Fundamental groups, homotopy maps, homotopy types. Calculation of fundamental Groups, Brouwer fixed point theorem.	25%
III	Triangulations, Barycentric subdivisions, triangulations and fundamental groups, Van Kampen's theorem.	25%
IV	Surfaces, classification theorem for surfaces, triangulations and orientations - Euler characteristics –surgery.	25%

**Basic Text & Reference Books:-**

- M.A. Armstrong, Basic Topology, Springer International Edition, Springer-Verlag, 2004.
- J. Munkers, Topology: A first course, Prentice Hall of India, 1984.

