

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

<b>Paper Code: PS04EMTH05</b>	<b>Total Credit: 4</b>
<b>Title Of Paper: Geometric Functional Analysis</b>	

Unit	Description in detail	Weighting (%)
I	Weak and weak*-topology, uniform boundedness principle, Alaglu's and Goldstein's theorems, reflexivity.	25%
II	Extreme points, Krein-Milman theorem, Jame's boundary, Ekeland's variational principle.	25%
III	Bisop-Phillips' theorem, projection and complementability in Banach spaces. Aulrbach bases.	25%
IV	Separable bases as subspaces of $C[0,1]$ and quotients spaces of $\ell^1$ . Sobczyk's theorem, Schur's property.	25%

**Basic Text & Reference Books:-**

- M. Fabian et al - Functional Analysis and Infinite dimensional geometry. Springer CMS Books, 2003.

