

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

<b>Paper Code: PS04EMTH10</b>	<b>Total Credit: 4</b>
<b>Title Of Paper: Ergodic Theory</b>	

<b>Unit</b>	<b>Description in detail</b>	<b>Weighting (%)</b>
I	Borel spaces, Borel automorphisms, orbit equivalence, Poincare recurrence Lemma.	25%
II	Ergodic Theorems of Birkhoff and Von Neumann, Ergodicity.	25%
III	Irrational rotation, mixing conditions and their characterizations.	25%
IV	Bernolli shifts, discrete spectrum theorems.	25%

**Basic Text & Reference Books:-**

- M. G. Nadkarni, Basic Ergodic Theory, Hindustan Book Agency, 1995.

