

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

Paper Code: PS04EMTH09	Total Credit: 4
Title Of Paper: Distributions & Sobolev Spaces	

Unit	Description in detail	Weighting (%)
I	Test functions and distributions, operations with distributions, supports and singular supports, convolution of functions and distributions.	25%
II	Fundamental solutions, Fourier transforms, Schwarz space, tempered distribution, inversion formula.	25%
III	Sobolev spaces, approximation by smooth functions, extension theorems and imbedding theorems.	25%
IV	Compactness theorem, trace theory, applications to weak solutions of elliptic boundary value problems.	25%

Basic Text & Reference Books:-

- S. Kesavan, Topics in Functional Analysis and Applications, Wiley Eastern, New Delhi, 1989.

