

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

<b>Paper Code: PS03EPST03</b>	<b>Total Credit: 4</b>
<b>Title Of Paper: Sophisticated Instrumental Analysis</b>	

<b>Unit</b>	<b>Description in detail</b>	<b>Weightage (%)</b>
I	Elementary principles, Instrumentation, sampling methods and application of FTIR, <sup>1</sup> HNMR, <sup>13</sup> C NMR ,	25%
II	Mass Spectrometry for the structural elucidation of organic compounds. Introduction to 2D-NMR and LC-MS/MS	25%
III	Theory, Instrumentation and applications of HPLC, HPTLC	25%
IV	Introduction and instrumentation of Atomic Absorption spectroscopy, XRD & SEM with special emphasis on polymer & pharmaceutical products.	25%

**Basic Text & Reference Books:-**

- Organic Spectroscopy, William Kemp, ILBS 3<sup>rd</sup> edition
- Spectrometric identification of organic compounds, Silver stein, John wiley pub. 6<sup>th</sup> edition.
- Applications of absorption spectroscopy of organic compounds, J.R.Dyer. 10<sup>th</sup> reprint.
- Instrumental methods of chemical analysis, B.K. Sharma, Goel pub., 26<sup>th</sup> edition.
- Instrumental Methods of analysis, Willard and Dean, CBS, 7<sup>th</sup> edition.
- Spectroscopy of organic compounds, P.S.Kalsi. Willey eastern ltd.
- HPTLC, D.Sethi, CBS 2<sup>nd</sup> edition.

