

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

<b>Paper Code: PS04CINC03</b>	<b>Total Credit: 4</b>
<b>Title Of Paper: Inorganic Polymers and Inorganic Spectroscopy</b>	

Unit	Description in detail	Weightage (%)
I	<b>Inorganic Polymers :</b> Introduction, classification of inorganic polymers, properties of polymers :the linear polymer molecules, shape of linear polymer molecules, crystalline and amorphous polymers, solubility parameter, glass- transition temperature, modulus-temperature curves, transitions of polymers, Important inorganic polymers: phosphorus-based polymers, sulphur-based polymers, boronbased polymers, silicon-based polymers.	25%
II	<b>Co-Ordination Polymers:</b> Introduction, general method of preparation, classification of coordination polymers, organometallic polymers, application of coordination polymers.	25%
III	<b>Electron Spin Resonance</b> Introduction, ESR spectrum (characteristics of the g-factor), hyperfine structure, interpretation of ESR spectra, applications of ESR	25%
IV	<b>Mossbauer Spectroscopy</b> Mossbauer effect, experimental methods, hyperfine interactions, molecular structure, electronic structure, applications of Mossbauer spectroscopy	25%

**Basic Text & Reference Books:-**

- Phosphorus-Nitrogen Compounds, H.R.Allcock.
- Inorganic Polymers, F.G.A. Stone and W.A.G. Graham.
- Inorganic Polymers, D.N. Hunter.
- Heteroatom Ring Systems and Polymers, H.R. Allcock.
- Development in Inorganic Polymers Chemistry, M.F. Lappert & G.J.Leigh.
- Modern Aspects of Inorganic Chemistry, H.Emeleus and A.G.Sharpe, Universal Books Stall, New Delhi Routledge & Kegan paul, London.
- Inorganic Polymers, G.R.Chatwal.
- Elements of Magnetochemistry, R.L. Dutta & A. Syamal.
- Spectroscopy Part, B.P. Straughan & S.Walker.
- Structural Methods in Inorganic chemistry, E.A.V. Ebsworth David, W.H.Rankin Stephen Cradock.

