

SARDAR PATEL UNIVERSITY
Programme & Subject: M.Sc (Polymer Science & Technology)
Semester: IV
Syllabus with Effect from: November/December-2013

Paper Code: PS04EPST05	Total Credit: 4
Title Of Paper: Petrochemicals	

Unit	Description in detail	Weightage (%)
I	Introduction: Petrochemical, Development of petrochemical industry, Petroleum refining, Petrochemical feed stocks from petroleum refining, The basic building block processes, Petrochemical process technology, Costs in chemical processing, Primary raw materials for Petrochemicals like Natural gas, Crude oils, coal, oils shell, tar sand and gas hydrates.	25%
II	Crude Oil Processing and Production of Hydrocarbon: Introduction, Physical separation Processes, Conversion Processes, Production of Olefines, Paraffinic hydrocarbon, olefins hydrocarbons, dienes, aromatic hydrocarbons, liquid petroleum fraction and residues.	25%
III	Alkanes and higher Paraffin based Chemicals: Introduction, Chemical based on synthetic gases, Chemical based on direct reaction of methane, ethane, propane and naphtha based chemicals from high molecular weight n-paraffin.	25%
IV	Chemicals based on olefin diolefin and aromatic hydrocarbon: Introduction, Chemicals from n-butenes, isobutylenes, butadiene, benzene, toluene, xylene.	25%

Basic Text & Reference Books:-

- Chemistry of Petrochemical Process, Sami Matar, Lewis F. Hatch, Gulf Professional Publishing, Boston.
- Fundamental of Petroleum Chemical Technology, P. Belov, Mir Publications, Moscow.
- Advanced Petroleum Refining, G. N. Sarkar, Khanna Publishers, Delhi
- Petrochemicals, Peter Wiseman, John Wiley & Sons, New York.

