

SARDAR PATEL UNIVERSITY
Programme & Subject: B.Sc (Industrial Chemistry-Vocational)
Semester: VI
Syllabus with Effect from: November-2013

Paper Code: US06CICV06	Total Credit: 3
Title of Paper: Selected Topics	

Unit	Description in Detail	Weightage (%)
I	Development of project, evolution of process, plant design factor, process design, choice of process, engineering flow diagram Selection of process equipments and materials, chemical reactors, plant layout	25%
II	Surface chemistry and interfacial phenomena, absorption, Sols, Gels, emulsions, Aerosols, surfactants, catalysis and catalyst, industrially important catalyzed reaction	25%
III	Advanced separation techniques – ion exchange- resins and equipments, membrane separation process, ultra-filtration, reverse osmosis, electro-dialysis	25%
IV	Automatic control system terminology, manual and automatic control, feed forward & feedback control system, process time lags, control action & types of control action, final control element	25%

Basic Text & Reference Books:

- Chemical engineering plant design, Vibrant & Dryden (McGrow hill publication)
- Chemical engineering (volume II) Colulson & Richardson
- Mechanical and Industrial measurement, R. K. Jain (Khanna Publishers)
- Plant design and economics for chemical engineering, Peter & Pimmerhours
- Unit operations of chemical engineering, McCabe & Smith.

