

SARDAR PATEL UNIVERSITY
Programme: B.Sc (Industrial Chemistry-Vocational)
Semester: V
Syllabus with effect from: June-2013

Paper Code: US05CICV06	Total Credit: 3
Title of Paper: Separation Techniques	

Unit	Description in detail	Weightage (%)
I	Characterization, uses and selection of separation process - Distillation, types of distillation, McCabe Thiele method for calculating plates, Importance of reflux ration	25%
II	Concept of mass transfer and mass transfer operation, Fick's law, gas absorption, equipment for gas-liquid separation, solvents for gas absorption, tower pickings, Liquid extraction	25%
III	Crystallization- methods of crystallization, batch and continuous crystallization, theory of crystallization, mechanism of crystallization, mass and enthalpy balance calculations, leaching.	25%
IV	Drying- classification of dryers, compartment dryer, tunnel dryer, rotary dryer, drum dryer, spray dryer, mechanism of drying	25%

Basic Text & Reference Books:

- Introduction of chemical engineering, Bedger & Bencherio (Mc Graw Hill)
- Unit operation of chemical engineering, McCabe & Smith
- Chemical engineering (Volume II) Calson & Richardson
- Unit operation (Volume II) K. A. Gavhane

