

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

Paper Code: US05CICV02	Total Credit: 3
Title of Paper: Heavy & Fine Inorganic Chemicals	

Unit	Description in detail	Weightage (%)
I	Synthetic nitrogen products – Ammonia, ammonium nitrate and ammonium sulphate, nitric acid, Phosphorous chemical – phosphorus, phosphoric acid, ammonium phosphate, super – phosphate, triple superphosphate. Industrial carbon – carbon black, manufacture of graphite and carbon, lime, gypsum, silicon, calcium carbide, silicon carbide.	25%
II	Fluorine, Bromine, Iodine, Inter-halogen compound. Sodium chloride, sodium sulphate, sodium sulphite, sodium thiosulphate. Industrial catalysts – Raney nickel, other forms of nickel, palladium and supported palladium, copper chromate, vanadium, platinum based catalyst, titanium tetrachloride, and titanium dioxide.	25%
III	Fine and speciality chemicals – sodium carbonate, sodium bicarbonate, potassium dichromate, oxalic acid, perchloric acid, fehling solution, Karl-Fischer reagent, sodium borohydrate, sodium ethoxide, sodium methoxide and lithium aluminium hydride.	25%
IV	Biochemical reagents: Ninhydrin, tetrazolium blue, 1,2-napthaquinone – 4 – sulphonate manufacture of following fine chemicals. Chromatographic materials and HPLC Solvents: Coating materials, precoating of plates, spectroscopy grade chemical. Methanol, ethanol, potassium bromide, carbon tetrachloride, Nujol, chloroform.	25%

Basic Text & Reference Books:

- Chemical process industries, Shreve RN, McGraw Hill.
- Introduction to material science and engineering, K M RELLS and T. COURTNEY, Wiley Eastern Pvt. Ltd. New Delhi.
- Outline of Chemical Technology, G E. Dryden, East West Press, New Delhi.
- Industrial Chemicals, Faith et. al. Wiley Interscience, New Delhi.

