

SARDAR PATEL UNIVERSITY**Programme: B.Sc (Chemistry)****Semester: VI****Syllabus with effect from: November/December-2013**

Paper Code: US06CCHE04	Total Credit: 3
Title Of Paper: Inorganic Chemistry	

Unit	Description in detail	Weighting (%)
I	Passivity & Corrosion Introduction to passivity, Alternative definition of passivity, Theories of passivity, Is passivity universal phenomenon?, Applications of passivity, Electrochemical passivity, Mechanical passivity, Introduction to corrosion, Economic aspects of corrosion, Types of corrosion, Corrosion by gaseous environment, Immersed corrosion, Prevention from corrosion. Basic Text & Reference Books:- ➤ Advanced Inorganic Chemistry Vol-1, 23 rd By Gurdeep Raj	
II	Alloy And Inter-Metallic Compounds Introduction, Effects of alloying, Properties of alloys, Preparation of alloys, Types of alloys: simple mixtures, solid solutions, substitutional alloys, intermetallic compounds, Super structures, electron compounds, Tamman's rule, Hume-Rothery rule, Succession of Hume-Rothery phases, Hume-Rothery's ratio rule, Rules for formation of alloys, Ferrous and non-ferrous alloys. Basic Text & Reference Books:- ➤ Advanced Inorganic Chemistry Volume I- 18 th By Gurudeep Raj	
III	Inter Halogen Compounds Inter halogen compounds, Introduction, Preparations, properties, structure, geometry and uses of Inter halogen compounds of type XY: iodine monochloride, chlorinemonofluoride, iodinemonobromide, Preparations, properties, structure and geometry of Inter halogen compounds of type XY ₃ : chlorine trifluoride, iodine trichloride, brominetrifluoride, Preparations, properties, structure and geometry of Inter halogen compounds of type XY ₅ : Chlorine pentafluoride, iodine pentafluoride, Preparations, properties, structure and geometry of Inter halogen compounds of type XY ₇ : Iodine heptafluoride, Structure of interhalogen compounds, Polyhalide ions and Polyhalides. Basic Text & Reference Books:- ➤ Advanced Inorganic Chemistry Volume I- 18 th By Satya Prakash, G.D.Tuli, S.K.Basu, R.D.Madan	
IV	Heavy Chemicals Sodium hydroxide Manufacture: Causticising process, electrolytic process (Nelson cell, Castner-Kellner cell, Kellner-Solvay cell), Properties and uses NaOH. Nitric acid Preparation of nitric acid in laboratory, Manufacture of nitric acid from nitre,	



<p>from air (Birkland and Eyde process), from ammonia (Ostwald's process), Concentration of nitric acid, Properties and uses of nitric acid.</p> <p>Sulphuric acid Manufacture: Lead chamber process, principal impurities present in the chamber acid and their removal, Concentration of chamber acid, Cascade process, Gaillard tower, Contact process, Properties and uses of sulphuric acid.</p> <p>Basic Text & Reference Books:-</p> <ul style="list-style-type: none">➤ Textbook of Inorganic Chemistry- 20th by P. L. Soni & Mohan Katyal	
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