

SARDAR PATEL UNIVERSITY
Programme: B.Sc (Home Science)
Semester: I
Syllabus with effect from: June-2011

Theory

Paper Code: UH01CCHE01	Total Credit: 2
Title Of Paper: Chemistry	

Unit	Description in detail	Weighting (%)
I	Fundamentals of Chemistry Scope and usefulness of chemistry Branches of Chemistry Classification of matter Laws of chemical Combination Dalton's atomic theory Structure of atom Bohr's Model of atom Electronic Configuration Atomic number Mass number Valence shell and Valence electrons Isotopes Radioactivity Modern Periodic table Symbols Radicals Chemical Formula Chemical Bonding and Types of Bonding Types of Chemical Reactions Chemical Reactions Complete and balance	20%
II	Solution Types of Solution Methods for representing Concentration of solution Molarity Normality Formality Molality Percentage W/W, W/V, V/V Mole Concept Mole fraction Diffusion and Osmosis Colloids Types of Colloids Difference of True, Colloidal and Suspension solution Properties of Colloids Gel and Emulsion Application of Colloids	20%



III	<p>Acid, base, Ph Acid Definition General Properties of acid Types of acid Preparation, Properties and uses of useful acids (HCl, H₂SO₄, HNO₃) Base-Definition General Properties of base Types of base Preparation, Properties and uses of useful base (NaOH, Na₂CO₃, NaHCO₃) P^H- Definition , P^H Scale, Explanation Usefulness of P^H Indicator Buffer Solution</p> <p>Chemical Formula, Properties and uses of following Compounds Chlorine Ammonia Carbon dioxide Potassium permanganate Hydrogen peroxide Boric acid Bleaching powder Potash alum</p>	20%
IV	<p>Thermochemistry Energy Types of energy Heat of reactions Hess law Endothermic and Exothermic Reaction</p> <p>Electrochemistry Redox reaction Definition Electrochemical cell Electrode potential Dry cell Lead Storage cell Corrosion Rate of Chemical reaction Definition and explanation Rate of Chemical reaction and factors affecting it Nature of reactant, Concentration of reactant, Temperature, Catalyst</p>	20%
V	<p>Metals Classification of metals Difference between Metal and non metal General properties of metal Properties, uses and alloys of Copper, Aluminum, Iron Precious metals: Silver ,Gold and platinum</p>	20%



Properties, uses and care of them	
Fire Extinguisher Type of fire Methods for extinguishing fire Chemical fire extinguishers Dry powder, Soda acid, Carbon dioxide, Foam types	

Basic Text & Reference Books

- Fundamental chemistry (P. L .Soni)
- Applied Chemistry (Thankama Jacob)
- Inorganic Chemistry (Gehani, Parekh, Bhagvat)
- Inorganic Chemistry (B.D. Madam, B.S. Bisht)
- Chemistry-Std.XI (Gujarat State boards of School text book)
- Chemistry-Std.XII (Gujarat State boards of School text book)

