

SYLLABUS :-

Physical Chemistry (Any 4 from the list given below) 1. Determination of heat of neutralization of acid by base 2. Conductometric titration 3. Chemical Kinetics 4. Effect of surfactants on the surface tension of water 5. Solubility of a sparingly soluble salt in water 6. pH metric titration Inorganic Chemistry (Any 4 from the list given below) 1. Spectrophotometric determination of acid dissociation constant of methyl red an acid base indicator 2. Potentiometric titration of a given sodium carbonate solution with aqueous hydrochloric acid solution 3. Determination of sodium (Na ) and potassium ion (K ) concentrations in any mineral or drinking water sample 4. Estimation of sulphate ion in Tap Water by Nepheloturbidimetric analysis 5. Estimation of iodine content in iodized salt by iodometric redox titration 6. Experimental verification of crystal field theory (CFT) and the spectrochemical series using cobalt(III) complexes Organic Chemistry (ALL 4 from the list given below) 1. Analysis of unknown organic solid sample 2. Analysis of unknown organic liquid sample 3. Synthesis of benzoic acid using household bleach 4. Reaction rate comparison for nucleophilic substitution reaction of organic halides