

SCA-5310

P III / 1 / 2

Andhra University

SYLLABUS

Department of Inorganic and Analytical Chemistry

M.Sc Final Chemistry

Syllabus for III rd Semester

Specialisation : *Analytical Chemistry*

Paper – III : Applied Analysis-I

(Effective from 2008-09 Admitted batch)

Unit – I Analysis of Ores

a) General techniques of analysis applied to complex materials - Scope of metallurgical analysis - General methods of dissolution of complex materials - Various chemical methods for the effective separation of the constituents in the complex materials.

b) Analysis of ores: Iron ore- Analysis of the Constituents – Moisture, loss of ignition, Total Iron, ferrous Iron, Ferric Iron, alumina, silica, Titania, Lime, Magnesia, Sulphur, phosphorous, manganese, alkalies, combined water, Carbon in blast furnace, flue dust and sinter.

c) Manganese Ore - Analysis of the Constituents – Total Manganese, MnO_2 , SiO_2 , BaO , Fe_2O_3 , Al_2O_3 , CaO , P and S

d) Chromite Ore - Analysis of the Constituents – Chromium, SiO_2 , FeO , Al_2O_3 , CaO , & MgO .

e) Phosphate rock Ore - Analysis of the Constituents - CaO , P_2O_5 , F, SiO_2 , CO_2 , S, Na_2O , Al_2O_3 , Fe_2O_3 , MgO , K_2O , Cl, MnO . Organic carbon, Moisture, Loss of ignition.

f) Aluminium Ore (Bauxite) - Analysis of the Constituents – Silica, Alumina, Fe_2O_3 , Titania, MnO , P_2O_5 , CaO , MgO , vanadium, zirconium, and alkalies.

Unit – II Analysis of Finished Products – I

a) Analysis of steel for C, Si, S, P, Mn, Ni, Cr; Mg and analysis of blast furnace slag.

b) Analysis of refractory materials: fire clay, flint spar, and magnesite

c) Analysis of fluxes - limestone and dolomite.

*** PLEASE SET TWO DIFFERENT QUESTION PAPERS.**

*** KINDLY ALHERE TO THE SYLLABUS STRICTLY**