

SC A-S-303

Andhra University

(21)

SYLLABUS

Department of Inorganic and Analytical Chemistry

M.Sc Final Chemistry

Syllabus for IIIrd Semester

Specialisation : *Analytical Chemistry*

Paper – III : Applied Analysis-I

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, phosphorus, 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 GET TWO DIFFERENT
QUESTION PAPERS.
KINDLY ADHERE TO THE
SYLLABUS STRICTLY