Sangola Taluka Shetkari shikshan Prasarak Mandal's

VIDNYAN MAHAVIDYALA, SANGOLA

(Teaching Plan)

Department Of chemistry

Name of Faculty**: Mr. R. S. Gaikwad (**Associate Professor)

Academic Year**: 2021 – 22** Class: **B.Sc. II** Semesters**: IV**

Paper No. **: VIII** Paper Name**: Inorganic chemistry**

Sr.No.	Class	Month	Chapter Details
1	B.Sc. II	December	**UNIT-II** **3. Industrial heavy Chemicals (07)** 3.1. Introduction 3.2. Physicochemical Principles & manufacture of following heavy chemicals: i) Ammonia by Haber process ii) Sulphuric acid by contact process.
2	B.Sc. II	January	**4. Metallurgy (08)** 4.1. Introduction: Terminology:- Metallurgy, Mineral, Ore, Gangue, Flux, Slag. 4.2. Occurrence of metals: Types of ores 4.3. Steps involved in metallurgical processes: A) Concentration of ores- I. Physical methods: a) Gravity separation method, b) Magnetic separation method, c) Froth flotation process. II. Chemical Methods: a) Calcination b) Roasting B) Reduction- i) Chemical methods of reduction

			ii) Electrolytic reduction method for e.g. Aluminium and copper **5. Iron and Steel (10)** 5.1 Occurrence of Iron 5.2 Extraction of Iron: Blast furnace 5.3 Types of Iron 5.4 Steel- A) Definition B) Types of Steel C) Manufacture of Steel: a) Bessemer process b) L. D. process D) Heat treatment on Steel
3	B.Sc. II	February	**UNIT-I** **1. Volumetric Analysis: (10)** 1.1 Introduction, Terminology:- Titrant; Titrand, standard solution; Titration Indicator; Equivalence point; End point.Primary standard ,Secondary standard. Strength of solution, volumetric analysis & their types. 1.2 Acid Base Titration i) Introduction ii) Theory of Acid-Base indicator : A) Colour change Interval B) Theories-Ostwald's theory & Quinoid theory, iii) Neutralization curve and choice of indicator for following titrations : A) Strong acid and Strong Base B) Strong Acid and Weak Base C) Weak Acid and Strong Base 1.3 Complexometric titration: A) General account, B) Types of EDTA Titrations, C) Metallochromic Indicator w.r.t. Eriochrome Black-T
4	B.Sc. II	March	**2. Gravimetric Analysis: (10)** 2.1. Introduction, Terminology :-Gravimetric analysis, Saturation, Super-saturation, Sol, Gel, Coagulation or Flocculation, Coagulation or Flocculation value, Peptisation, Precipitation, Precipitate, Precipitant, Solubility, Aging or digestion, Ignition, 2.2. General steps involved in gravimetry 2.3 Precipitation-A) Physical nature and crystalline of precipitate : Gelatinous, Curdy and crystalline B) Conditions of Precipitation 2.4 Process of Precipitation- A) Nucleation B) Crystal growth C) Digestion

			2.5 Co-precipitation and post precipitation and their difference. 2.6. Role of Organic precipitants in garavimetric analysis. 2.7 Study of organic precipitants Viz. A) DMG B) Aluminon, C) 8-Hydroxy quinoline 2.8. Advantages and disadvantages of organic precipitants.