CH202 Chemistry-II (3-1-0) Credits:4
Theory: 100
Sessional:50
Time: 3 hours

Unit-I

Organic-inorganic Compounds and Combustion of fuels 50 marks

Organic Compounds and their importance: - Synthetic and Natural Polymers- formation, properties and applications, biodegradability of polymers; conductive polymers.

Carbohydrates, nucleic acids, proteins. Natural products and ideas about their isolation and characterization

Elementary ideas about co-ordination and organometallic compounds, their properties and applications

Introduction to bio-organic and bio-inorganic chemistry

Combustion- heat of reaction, calculation of energy changes in chemical reactions.

Unit-II

Materials and their properties 25 marks

Introduction to magnetic, electrical and optical properties of materials.

Glasses and plastics; Electronic materials- semiconductors and superconductors- applications.

Ceramics and refractories;Zeolites and clays- structure and applications.

Cements- composition, setting and hardening of cement.

Composites- composition, strength and durability; dielectrics. Organic materials- Liquid crystals

Introduction to nanomaterials and nanotechnology

Unit-III

Biochemistry and Biotechnology 25 Marks

Principles and selected aspects of biochemical phenomena.

Introduction to biotechnology- connections with chemistry. Applications of computers and information technology; drugs – their discovery and action- bioinformatics and cheminformatics.