

# SYLLABUS

PANJAB UNIVERSITY, CHANDIGARH

B.Sc-II [Semester-III]

Paper-IX : Inorganic chemistry - A

Time : 3 Hrs

60 Hours : 2Hrs/week

Max. Marks : 22 + 3

(3 Periods/week)

## Objective of the course

To teach the fundamental concepts of Chemistry and their applications. The syllabus pertaining to B.Sc. (General) (Semester System) in the subject of Chemistry has been upgraded as per provision of the UGC module and demand of the academic environment. The course contents have been revised from time to time as per suggestions of the teachers of the Chemistry working in the Panjab University, Chandigarh and affiliated colleges. The syllabus contents are duly arranged unit wise and contents are included in such a manner so that due importance is given to requisite intellectual and laboratory skills.

## UNIT - I

### Chemistry of elements of First Transition Series

8 Hrs.

Characteristic properties of *d*-block elements.

Properties of the elements of the first transition series, their simple compounds and complexes, illustrating relative stability of their oxidation states, coordination number and geometry.

## UNIT - II

### Chemistry of Elements of Second and Third Transition Series

7 Hrs.

General characteristics, comparative treatment with their 3d-analogues in respect of ionic radii, oxidation states, magnetic behaviour, spectral properties and stereochemistry.

## UNIT - III

### Chemistry of Coordination Compounds - I

8 Hrs.

Werner's coordination theory and its experimental verification, effective atomic number concept, chelates, nomenclature of coordination compounds, isomerism in coordination compounds.

## UNIT - IV

### Chemistry of Coordination Compounds - II

7 Hrs.

Valence bond theory of transition metal complexes. Properties of Coordination compounds i.e. magnetic properties, colours (Qualitative approach only), use of coordination compounds.

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