

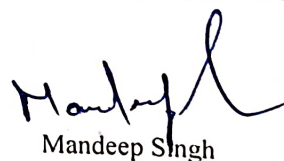
Lesson Plan  
Session 2023-2024 (Even Semester)

Name of the Assistant Professor: *Mandeep Singh*

Subject: *Inorganic Chemistry*

Class: *B.Sc. II (4th Sem)*

Sr. No.	Month	Topic
1	Jan, 2024	<b>Section- A</b> <b>Chemistry of f-Block elements</b> Lanthanides: Electronic structure, oxidation states, magnetic properties, complex formation, colour, ionic radii and lanthanide contraction, occurrence, separation of lanthanides, Lanthanide compounds. <b>REVISION</b>
2	Feb, 2024	<b>Actinides: General characteristics of actinides, chemistry of separation of Np, Pu and Am from uranium, Transuranic elements, comparison of properties of Lanthanides and actinides with transition elements.</b> <b>REVISION</b>
3	March, 2024	<b>Section- B</b> <b>Quantitative Analysis</b> Chemistry of analysis of various groups of basic and acidic radicals, chemistry of identification of acid radicals in typical combination, chemistry of interference of acid radicals including their removal in the analysis of basic radicals, <b>REVISION</b>
4	April and May, 2024	<b>Quantitative Analysis</b> Common ion effect, solubility product, theory of precipitation, co-precipitation, post precipitation, purification of precipitates. <b>REVISION</b>



Mandeep Singh

Chemistry Department

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Lesson Plan

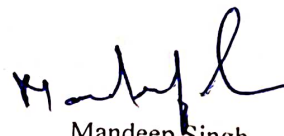
Session 2023-2024 (Even Semester)

Name of the Assistant Professor: *Mandeep Singh*

Class: *B.Sc. III (6th Sem)*

Subject: *Inorganic Chemistry*

Sr. No.	Month	Topic
1	Jan, 2024	<b>Section- A</b> <b>Acids and Bases</b> Arrhenius, Bronsted-lowry, Lux-flood, solvent system and Lewis concept of acids and bases, relative strength of acids and bases, levelling solvents, hard and soft acids and bases(HSAB), Applications of HSAB principle. <b>REVISION</b>
2	Feb, 2024	<b>Organometallic chemistry</b> Definition, classification and nomenclature of organometallic compounds, preparation, properties and bonding of alkyls of Li, Al, Hg and Sn, concept of hapticity of organic ligand, Structure and bonding in metal-ethylene complexes, Structure of Ferrocene, classification in metal carbonyls, preparation, properties and bonding in mononuclear carbonyls. <b>REVISION</b>
3	March, 2024	<b>Section – B</b> <b>Bio inorganic chemistry</b> Metal ions present in biological system, classification on the basis of action (essential, non-essential, trace, toxic), Metalloporphyrins with special reference to haemoglobin and myoglobin. Biological role of Na <sup>+</sup> , K <sup>+</sup> , Ca <sup>2+</sup> , Mg <sup>2+</sup> , Fe <sup>2+</sup> ions, Cooperative effect, Bohr effect. <b>REVISION</b>
4	April and May, 2024	<b>Silicones and Phosphazenes:</b> Nomenclature, classification, preparation and uses of silicones, elastomers, polysiloxane copolymers, poly phosphazenes and bonding in triphosphazene. <b>REVISION</b>



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