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Lesson Plan Chemistry 16th July 2018 to N

Name of the Assistant/Associate Professor. Ms. Premila Yada

Class :- BSc IVth Sem. Medical + Biotech

Subject Name :- Inorganic Chemistry

→ July week 1 (16th to 21st)

Chapter I :- Metal-Ligand Bonding in Transition M Complex

- Limitation of Valence bond theory.
- Assumptions of Crystal field theory

→ July week 2 (23rd to 28th)

- Crystal field splitting in octahedral complexes.
- Calculate CFSE in octahedral complex.

→ July week 3 (30th July - 4th Aug)

- Crystal field splitting in tetrahedral & Squa planar Complex.

→ Aug. week 4 (6th Aug - 11th Aug)

- Calculate CFSE in tetrahedral complex
- Colours of transition metal complex

→ Aug week 5 (13th Aug - 18th Aug)

- Factors affecting the crystal-field parameter
- Revision.

→ Aug. week 6 (20th Aug - 25th Aug)

Chapter II :- Thermodynamic and Kinetic Aspects of Complex:

- Thermodynamic Stability
- Stability constants of complexes

→ Aug week 7 (27th Aug - 1st sep)

- Kinetic and thermodynamic Stability

→ September week 8 (1st sep - 8 sep)
- Factors affecting the stability of complexes
- Irving William Series

→ September week 9 (11th sep - 15th sep)
- Substitution reactions in square planar complexes
- Rate law for nucleophilic substitution in square planar comple

September week 10 (17th sep - 22nd)
- Trans effect
- Theories of trans effect, revision

→ September week 11 (24th sep - 29th)

Chapter-III Magnetic properties of transition metal complexes
- Types of magnetic behaviours
- Magnetic susceptibility

→ October week 12 (1st oct to 6th October)
- Methods of determining magnetic susceptibility
- Gouy's method, faraday method.

→ October week 13 (8th oct to 13th October)
- Spin-only formula, L-S coupling
- correlation of μ_s & μ_{eff} values

→ October week 14 (15th october - 20th October)
- orbital contribution to magnetic moments
- application of magnetic moment data for 3-d metal complexes.

→ October week 15 (22nd oct - 27th oct.)

- Chapter IV: Electron Spectra of transition metal complexes
  - Types of electronic transitions
  - Selection rules for d-d transitions.

- Spectrochemical series.

→ November week 17th (5th Nov to 17th Nov)
- Orgel - energy level diagram for d^1 & d^9 stat

→ November week 18th (19th Nov to 24th Nov.)
- Discussion of the electronic spectrum of $[Ti(H_2O)$ complex ion.

→ November week 19th. (26th Nov. to 30th Nov)
- Revision of whole syllabus
- Test, Numericals.