

## Sample Format (Lesson Plan)

MCM DAV College for Women, Sector – 36A, Chandigarh  
Monthly Teaching Plans (Odd Semester)  
Session – (2022-23)

Name of the Teacher/s: Dr. Shweta Sareen, Dr. Renu and Dr. Archana

Department Post Graduate Department of Chemistry

Class: B.Sc III Subject: Inorganic Chemistry Section (s): Non MedA, B

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1	25-08-2022	20-09-2022	<b>Ligand Bonding in Transition Metal Complexes</b> Limitations of valence bond theory, an elementary idea of crystal – field theory, crystal field splitting in octahedral, tetrahedral and square planar complexes, factors affecting the crystal – field parameters, Spectro chemical Series.	Lecture Method
2	21-09-2022	30-09-2022	<b>Thermodynamic and Kinetic Aspects of Metal Complexes</b> A brief outline of thermodynamic and Kinetic stability of metal complexes and factors affecting the stability, substitution reactions of square planar complexes	Lecture Method
3	1-10-2022	15-10-2022	<b>Organometallic Chemistry</b> Definition, nomenclature and classification of organometallic compounds. Preparation, properties, bonding .	Lecture Method, assignments and Group Discussion
4	17-10-2022	24-10-2022	Applications of alkyls and aryls of Li, Al , Hg, Sn and Ti, a brief account of metal – ethylenic complexes and homogeneous hydrogenation, mononuclear carbonyls and the nature of bonding in metal carbonyls	Lecture Method and Group Discussion

5	25-10-2022	12-11-2022	<b>Bioinorganic Chemistry</b> Essential and trace elements in biological processes, metalloporphyrins with special reference to haemoglobin and myoglobin.	Lecture Method and Group Discussion
6	14-11-2022	Till exam	Biological role of alkali and alkaline earth metal ions. Nitrogen fixation	Lecture Method and Group Discussion
<b>Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans</b>				
10 <sup>th</sup> Oct, 2022	The teachers have completed the scheduled chapters and topics as shown in the lesson plan			
<b>Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans</b>				
26 <sup>th</sup> Oct, 2022	The teachers have completed the scheduled chapters and topics as shown in the lesson plan			
<b>Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans</b>				
17 <sup>th</sup> Nov, 2022	The teachers have completed the scheduled chapters and topics as shown in the lesson plan			
<b>Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans</b>				
27 <sup>th</sup> Nov, 2022	The teachers have completed the scheduled chapters and topics as shown in the lesson plan			

**\*Any of these** – (i) Lecture Method; (ii) PPT; (iii) Online Sources; (iv) Group Discussion; (v) Case Studies etc.  
Other Methods adopted by the teacher – Please write the specific teaching method

## Sample Format (Lesson Plan)

**MCM DAV College for Women, Sector – 36A, Chandigarh**  
**Monthly Teaching Plans (Even Semester)**  
**Session – (2022-23)**

**Name of the Teacher/s: Dr. Shweta Sareen, Dr. Renu and Dr. Archana**

**Department Post Graduate Department of Chemistry**

**Class: B.Sc III Subject: Inorganic Chemistry Section (s): Med A, Non Med B**

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1	16.01.2023	25.01.2023	<b>Silicones and Phosphazenes</b> Silicones and phosphazenes as examples of inorganic polymers, nature of bonding in triphosphazenes.	Lecture Method
2	27.01.2023	16.02.2023	<b>Hard and Soft Acids and Bases</b> Classification of acids and bases as hard and soft Pearson's HSAB concept, acid-base strength and hardness and softness. Symbiosis, theoretical basis of hardness and softness, electronegativity and hardness and softness	Lecture Method
3	17.02.2023	28.03.2023	<b>Electronic Spectra of Transition Metal Complexes</b> Types of electronic transitions, L – S coupling, selection rules for d-d transitions, spectroscopic ground states, Orgel – energy level diagram for d1 and d9states, discussion of the electronic spectrum of [Ti(H <sub>2</sub> O) <sub>6</sub> ] <sup>3+</sup> complex ion	Lecture Method and Group Discussion
4	29.03.2023	Till exams	<b>Magnetic Properties of Transition Metal Complexes</b> Types of magnetic behaviour, methods of determining magnetic susceptibility, spin-only formula. Correlation of $\mu_s$ and $\mu_{eff}$ values, orbital contribution to magnetic moments, application of magnetic moment data for 3d metal complexes	Lecture Method

<b>Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans</b>	
<b>25<sup>th</sup> Jan, 2023</b>	The teachers have completed the scheduled chapters and topics as shown in the lesson plan
<b>Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans</b>	
<b>3<sup>rd</sup> Feb, 2023</b>	The teachers have completed the scheduled chapters and topics as shown in the lesson plan
<b>Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans</b>	
<b>15<sup>th</sup>, March 2023</b>	The teachers have completed the scheduled chapters and topics as shown in the lesson plan
<b>Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans</b>	
<b>8<sup>th</sup> April, 2023</b>	The teachers have completed the scheduled chapters and topics as shown in the lesson plan

**\*Any of these** – (i) Lecture Method; (ii) PPT; (iii) Online Sources; (iv) Group Discussion; (v) Case Studies etc.  
Other Methods adopted by the teacher – Please write the specific teaching method