Lesson Plan

MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans (1st Semester)
Session: 2023-24

Name of the Teacher: Dr. Archana, Dr. Yesbinder Kaur and Dr. Manjot Kaur

Department: Chemistry

Class: B.Sc (1st Semester) **Subject:** Inorganic Chemistry

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1.	26-07-2023	02-08-2023	Idea of de Broglie matter waves, Heisenberg uncertainty principle, atomic orbitals	Lecture
2.	03-08-2023	18-08-2023	Schrodinger wave equation, significance of Ψ and Ψ^2, quantum numbers, radial and angular wave functions and probability distribution curves	Lecture and discussion
3.	19-08-2023	26-08-2023	Shapes of s, p, d orbitals, Aufbau and Pauli exclusion principle, Hund's multiplicity rule, electronic configuration of elements and ions	Lecture
4.	28-08-2023	13-09-2023	Position of elements in the periodic table, Effective nuclear charge and its calculation, Atomic and ionic radii, ionization energy, electron affinity and electronegativity	Lecture and group discussion
5.	14-09-2023	21-09-2023	Methods of determination of electronegativity, trends in periodic table and application in predicting and explaining the chemical behaviour	Lecture
6.	22-09-2023	30-09-2023	Chemical properties of the noble gases, chemistry of	Lecture

			xenon, structure and bonding in xenon compounds, Comparative study, diagonal relationships, salient features of hydrides	
7.	03-10-2023	19-10-2023	Solvation and complexation tendencies including their functions in biosystems, introduction to alkyls and aryls. Covalent Bond- Valence bond theory and its limitations	Lecture
8.	20-10-2023	31-10-2023	Directional characteristics of covalent bond, various types of hybridizations and shapes of simple inorganic molecules and ions. BeF_2, BF_3, CH_4, PF_5, SF_6, IF_7, $SnCl_2$, XeF_4, BF_4^-, PF_6^-, $SnCl_6^{2-}$	Lecture, Group discussion and Seminar
9.	01-11-2023	Till exam	VSEPR Theory to NH_3, H_3O^+, SF_4, ClF_3, ICl_2^- and H_2O, MO theory, homonuclear elements and ions and heteronuclear (BO, CN, CO^+, NO^+, CO, CN^-), diatomic molecules Percentage ionic character from dipole moment and electronegativity difference	Lecture, Group discussion and Seminar Lecture

Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans	
30th August, 2023	The teachers have completed the scheduled chapters and topics as shown in the lesson plan
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans	
29th Sept, 2023	The teachers have completed the scheduled chapters and topics as shown in the lesson plan
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans	
31th Oct, 2023	The teachers have completed the scheduled chapters and topics as shown in the lesson plan

Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans

22th Nov, 2023	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

Lesson Plan

MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans (2nd Semester)
Session –2022-23

Name of the Teacher: Dr. Archana, Dr. Yesbinder Kaur and Dr. Manjot Kaur

Department: Chemistry

Class: B.Sc (2nd Semester) **Subject:** Inorganic Chemistry

S. No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1.	09.01.2024	31.01.2024	Ionic Solids – Concept of close packing, Ionic structures, (NaCl type, Zinc blende, Wurtzite, CaF_2 and antifluorite)	Lecture, PPT, videos explaining the close packing and structure
2.	01-02-2024	18.02.2024	Radius ratio rule and coordination number, limitation of radius ratio rule, lattice defects, semiconductors, Lattice energy and Born-Haber cycle, solvation energy and solubility of ionic solids	Lecture, PPT
3.	19-02-2024	05-03-2024	Polarizing power and polarisability of ions, Fajan's rule. Metallic bond-free electron, valence bond and band theories. Weak Interactions – Hydrogen bonding, Vander Waals forces.	Lecture
4.	06-03-2024	16.03.2024	Comparative study (including diagonal relationship) of groups 13-14 elements, compounds like hydrides, oxides, oxyacids and halides of groups 13-14, hydrides of boron-diborane	Lecture
5.	18.03.2024	25.03.2024	Higher boranes, borazine, borohydrides, fullerenes, carbides, fluorocarbons.	Lecture and group discussion
6.	26.03.2024	08.04.2024	Comparative study of groups 15-17 elements, Compounds like hydrides, oxides	Lecture

7.	09.04.2024	Till exam	oxyacids and halides of groups 15-17, silicates (structural principle), tetrasulphur tetranitride. Basic properties of halogens, interhalogens and polyhalides	Lecture

Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans	
30-01-2024	The teachers have completed the scheduled chapters and topics as shown in the lesson plan
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans	
24-02-2024	The teachers have completed the scheduled chapters and topics as shown in the lesson plan
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans	
28-03-2024	The teachers have completed the scheduled chapters and topics as shown in the lesson plan
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans	
19-04-2024	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