

Lesson Plan

MCM DAV College for Women, Sector – 36A, Chandigarh
Monthly Teaching Plans (1st Semester)
Session: 2022-23

Name of the Teacher: Dr. Aashima Sharma

Department: Chemistry

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

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1.	25-08-2022	07-09-2022	Idea of de Broglie matter waves, Heisenberg uncertainty principle, atomic orbitals	Lecture
2.	09-09-2022	20-09-2022	Schrodinger wave equation, significance of Ψ and Ψ^2 , quantum numbers, radial and angular wave functions and probability distribution curves	Lecture and discussion
3.	21-09-2022	30-09-2022	Shapes of s, p, d orbitals, Aufbau and Pauli exclusion principle, Hund's multiplicity rule, Electronic configuration of elements and ions	Lecture
4.	1-10-2022	15-10-2022	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.	17-10-2022	24-10-2022	Methods of determination of electronegativity, trends in periodic table and application in predicting	Lecture

			and explaining the chemical behaviour	
6.	25-10-2022	3-11-2022	Chemical properties of the noble gases, chemistry of xenon, structure and bonding in xenon compounds, Comparative study, diagonal relationships, salient features of hydrides	Lecture
7.	4-11-2022	12-11-2022	Solvation and complexation tendencies including their functions in biosystems, introduction to alkyls and aryls. Covalent Bond- Valence bond theory and its limitations	Lecture
8.	14-11-2022	22-11-2022	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.	23-11-2022	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	
10 th Oct, 2022	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	
26 th Oct, 2022	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	
17 th Nov, 2022	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	
27 th 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

Lesson Plan

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

Name of the Teacher: Dr. Aashima Sharma and Dr. Archana

Department: Chemistry

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

S.No.	Date (Monthly)		Topics to be Covered	Academic Activity Undertaken*
	From	To		
1.	16-01-2023	25-01-2023	Ionic Solids – Concept of close packing, Ionic structures, (NaCl type, Zinc blende, Wurtzite, CaF ₂ and antiferite)	Lecture, PPT, videos explaining the close packing and structure
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans 22 th Jan, 2023				
2.	27-01-2023	30-01-2023	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.	2-02-2023	13-02-2023	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
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 3 rd Feb, 2023				
4.	14-02-2023	2-03-2023	Comparative study (including diagonal	Lecture

			relationship) of groups 13-14 elements, compounds like hydrides, oxides, oxyacids and halides of groups 13-14, hydrides of boron-diborane	
5.	03-03-2023	30-03-2023	Higher boranes, borazine, borohydrides, fullerenes, carbides, fluorocarbons.	Lecture and group discussion
Departmental Meeting to Coordinate and Review the Monthly completion of Syllabus as per lesson plans on 15th, March 2023				
6.	31-03-2023	12-04-2023	Comparative study of groups 15-17 elements, Compounds like hydrides, oxides	Lecture
7.	17-04-2023	Till exams	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 on 8th April, 2023				

*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