

LESSON PLAN- B.Sc 1st SEMESTER
Session: 2022-23

Name of teacher- Dr. Anju Siwach, Assistant Professor

Subject- Inorganic Chemistry

CLASS	WEEKS	SYLLABUS
B.Sc 1 st Semester	22-8-2022 to 27-8-2022 29-8-2022 to 3-9-2022 5-9-2022 to 10-9-2022 12-9-2022 to 17-9-2022	Atomic Structure: Idea of de Broglie matter waves, Heisenberg uncertainty principle, atomic orbitals, Idea of quantum numbers, radial and angular wave functions and probability distribution curves, shapes of s, p, d orbitals.
	19-9-2022 to 24-9-2022 26-9-2022 to 1-10-2022 3-10-2022 to 8-10-2022 10-10-2022 to 19-10-2022	Periodic Properties General principles of periodic table: Aufbau and Pauli exclusion principles, Hund's multiplicity rule. Electronic configurations of the elements, effective nuclear charge, Slater's rules. Atomic and ionic radii, ionization energy, electron affinity Electronegativity –definition, methods of determination or evaluation, trends in periodic table (in s & p block elements)

	<p>27-10-2022 to 5-11-2022</p> <p>7-11-2022 to 12-11-2022</p> <p>14-11-2022 to 19-11-2022</p>	<p>Covalent Bond Valence bond theory and its limitations, directional characteristics of covalent bond, various types of hybridization</p> <p>shapes of simple inorganic molecules and ions (BeF₂, BF₃, CH₄, PF₅, SF₆, IF₇ SO₄²⁻, ClO₄⁻)Valence shell electron pair repulsion (VSEPR) theory to NH₃, H₃O⁺, SF₄, ClF₃, ICl₂⁻ and H₂O.</p> <p>MO theory of heteronuclear (CO and NO) diatomic molecules, bond strength and bond energy, percentage ionic character from dipole moment and electronegativity difference.</p>
	<p>21-11-2022 to 26-11-2022</p> <p>28-11-2022 to 3-12-2022</p> <p>5-12-2022 to 10-12-2022</p>	<p>Ionic Solids Ionic structures (NaCl, CsCl, ZnS (Zinc Blende), CaF₂) radius ratio effect and coordination number,</p> <p>limitation of radius ratio rule, lattice defects, semiconductors, lattice energy and Born-Haber cycle,</p> <p>solvation energy and its relation with solubility of ionic solids, polarizing power and polarizability of ions, Fajan's rule.</p>
	<p>12-12-2022 to 17-12-2022,</p> <p>17-12-2022 onwards</p>	<p>Assignments, Viva, Test, Revision</p> <p>MDU examination</p>