**GOVT. COLLEGE BAROTA, GOHANA**

**Lesson Plan**

**(October 12, 2023 to November 25, 2023)**

NAME OF EMPLOYEE:- DEVENDER SINGH

ACADEMIC SESSION:- 2023-24

CLASS:- B.Sc. I Non-Medical SEM. – 1st

SUBJECT:- INORGANIC CHEMISTRY

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|  Dates  | Topics/ Chapters to be covered/ Events  |
| 12th -14th Oct., 2023 | UNIT :- 1 : Idea of de Broglie matter waves, Heisenberg uncertainty principle  |
| 16th - 21st Oct. , 2023 | Atomic orbitals, quantum numbers, radial and angular wave functions |
| 23rd - 28th Oct. , 2023 |  Normal and orthogonal wave functions, Significance of Ψ and Ψ2, Probability distribution curves  |
|  | Shapes of s, p, d, f orbitals, Aufbau and Pauli exclusion principles, Hund’s multiplicity rules  |
| 30th Nov. - 4th Nov. , 2023 | UNIT : - 2:-Electronic configuration of elements, Effective nuclear charge, Slater’s rules  |
|  | Classification of periodic table into s, p, d, f blocks, Atomic and ionic radii, Ionization energy, Electron affinity  |
| 6th - 11th Nov., 2023 | Electro-negativity definition, methods of determination or evaluation, trend in periodic table (in s and p-block elements)  |
|  | UNIT – III Valence Bond Theory and its limitations, directional characteristics of covalent bond  |
| 20th - 25th Nov., 2023 | Various type of hybridizations, Shapes of simple inorganic molecules and ions (BeF2, BF3, CH4, PF5, SF6, IF7, SO42-, ClO4- )  |
|  | Valence Shell Electron Pair Repulsion Theory (VSEPR) theory to NH3, H3O+, SF4, ClF3, ICl2- and H2O, MO theory of hetero nuclear (CO and NO) diatomic molecules  |
|  Extra Class 23rd - 28th Oct., 2023 | Bond Strength and bond energy, Percentage ionic character from dipole moment and electronegativity difference  |
| Extra Class30th Oct. - 4th Nov., 2023 | UNIT – IVIonic structures (NaCl, CsCl, ZnS (zinc blende), CaF2), Radius ratio effect and coordination number  |
|  | Limitation of radius ratio rule, Lattice defects, semiconductors  |
| Extra Class6th Nov. - 11th Nov., 2023 | Lattice energy and Born-Haber cycle, Solvation energy and its relation with solubility of ionic solids  |
|  | Polarizing power and polarizability of ions, Fajan’s rule  |