**Lesson Plan (2018-19)**

**Dr. Joginder**

**BScI (Non-Medical) Section-A**

**Subject: Inorganic chemistry**

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| **Week** | **Date** | **Day** | **Topic** |
| **1** | **15 july 2018** | **Sunday** | ####################### |
| 16 july 2018 | Monday | **Atomic Structure:** Idea of de Broglie matter waves, Heinsenberg’s uncertainty principle |
| 17 july 2018 | Tuesday | Atomic orbitals, quantum numbers |
| **2** | **22 july 2018** | **Sunday** | #################### |
| 23 july 2018 | Monday | Radial and angular wave functions, normal and  orth**ogonal wave functions,** |
| 24 july 2018 | Tuesday | **significance of Ψ and Ψ2,** probability distribution  curves, |
| **3** | **29 july 2018** | **Sunday** | ################## |
| 30 july 2018 | Monday | Shapes of s, p, d, f orbitals, Aufbau and Pauli exclusion principles, |
| 31 july 2018 | Tuesday | **Govt. Holiday** |
| **4** | **05 Aug-2018** | **Sunday** | ############### |
| 06 Aug-2018 | Monday | Hund’s multiplicity rules, Electronic configuration of elements, |
| 07 Aug-2018 | Tuesday | Effective nuclear charge and Slater’s rules. |
| **5** | **12 Aug-2018** | **Sunday** | ###################### |
| 13 Aug-2018 | Monday | **Periodic table and atomic properties:**  Classification of periodic table into s, p, d, f blocks, |
| 14 Aug-2018 | Tuesday | Atomic and ionic radii, |
| **6** | **19 Aug-2018** | **Sunday** | ################## |
| 20 Aug-2018 | Monday | Ionisation energy, |
| 21 Aug-2018 | Tuesday | Electron affinity |
| 22 Aug-2018 | Wednesday | **Govt holiday due to Bakrid(Id)** |
| **7** | **26 Aug-2018** | **Sunday** | **Raksha Bandhan** |
| 27 Aug-2018 | Monday | Electronegativity definition, methods of  determination or evaluation, trend in periodic table (in s and p-block elements), |
| 28 Aug-2018 | Tuesday | Pauling and Mulliken scale of electronegativity |
| **8** | **02 sept-2018** | **Sunday** | **################** |
| 03 sept-2018 | Monday | **Govt Holiday, Krishan Janamashtmi** |
| 04 sept-2018 | Tuesday | Allred Rachow and Mulliken Jaffe’s electronegativity scale, Sanderson’s electron density ratio. |
| **9** | **09 sept-2018** | **Sunday** | **##################** |
| 10 sept-2018 | Monday | **Covalent Bond:** Valence bond theory (Heitler-London and Pauling approach) and its limitation, |
| 11 sept-2018 | Tuesday | Directional characteristics of covalent bond and various type of hybridisation |
| **10** | **16 sept-2018** | **Sunday** | **#################** |
| 17 sept-2018 | Monday | Shapes of simple inorganic molecules and ions (BeF2, BF3, CH4, PF5, SF6, IF7,  SO4,-2, ClO4-1,  - NO3-1) |
| 18 sept-2018 | Tuesday | Valence shell electron pair repulsion (VSEPR) theory to NH3, H3O+, SF4, ClF3, H2O, SnCl2, ClO3  -1 and ICl2-1. |
| **11** | **23 sept-2018** | **Sunday** | **####################** |
| 24 sept-2018 | Monday | Molecular orbital theory of Homonuclear (N2, O2) |
| 25 sept-2018 | Tuesday | **Class Test** |
| **12** | **30 sept-2018** | **Sunday** | **###################** |
| 01 Oct-2018 | Monday | Molecular orbital theory of Heteronuclear (CO and NO) ,diatomic molecules and ions, |
| 02 Oct-2018 | Tuesday | **Govt Holiday, Gandhi Jayanti.** |
| **13** | **07 Oct-2018** | **Sunday** | ###################### |
| 08 Oct-2018 | Monday | Bond energy, bond angle, bond length and dipole moments. |
| 09 Oct-2018 | Tuesday | Percentage ionic character from dipole moment and electronegativity difference. |
| **14** | **14 Oct-2018** | **Sunday** | ################## |
| 15 Oct-2018 | Monday | **Ionic Solids:** Ionic structures (NaCl, CsCl, ZnS (Zinc blende). |
| 16 Oct-2018 | Tuesday | Structure of CaF2, size effects, radius ratio  rule and its limitations, |
| **15** | **21 Oct-2018** | **Sunday** | ################### |
| 22 Oct-2018 | Monday | Madelung constant, Stoichiometric and Non- stoichiometric defects in crystals, |
| 23 Oct-2018 | Tuesday | Lattice energy (mathematical derivation excluded) and Born-Haber cycle, |
| **16** | **28 Oct-2018** | **Sunday** | ############## |
| 29 Oct-2018 | Monday | Solvation energy and its relation with solubility of Ionic solids. |
| 30 Oct-2018 | Tuesday | Polarizing power and Polarisability of ions, Fajan’s rule. |
| **17** | **04 Nov-2018** | **Sunday** | ################### |
| 05 Nov-2018 | Monday | Revision |
| 06-13 |  | Vacation-I(Diwali) |
|  | 14 | Wednesday | KUK Exam |