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| **Indian School Al Wadi Al Kabir**  **ANNUAL Syllabus break up for 2019-20**  **August 2019 - Chemistry** | | | | | |
| Class 11  chemistry | Week1  July  31st,  August 1st | Week2  August(4 - 8) | Week3  August (11 - 14) | Week4  August  (18 - 22) | Week5  August (25 -29) |
| **July AND August** | **CHEMICAL BONDING AND MOLECULAR STRUCTURE**  Valence electrons, ionic bond, covalent bond; Lewis structure of molecules  Polar character of covalent bond | Formal charge, bond parameters, covalent character of ionic bond, valence bond theory, Orbital overlap concept, resonance,  geometry of covalent molecules | Strength of Sigma and pi bonds, Concept of hybridization, involving s, p and d orbitals | Shapes of some simple molecules, molecular orbital theory of homonuclear diatomic molecules, hydrogen bond.  Bond order  Magnetism and stability of molecules  Discussion of TBQs and Worksheet | **STATES OF MATTER**  States of Matter: Gases and Liquids. Intermolecular interactions, Melting and boiling points, Boyle's law, Charles law, Gay Lussac's law, Avogadro's law, Ideal behaviour, Empirical derivation of gas equation,  Ideal gas equation, Daltons law of Partial pressures, Kinetic molecular theory of gases.  Molecular speeds |
| **PRACTICAL :**   * ANALYSIS OF SALT IV and V | | | | | |

**ANNUAL SYLLABUS BREAK –UP**

**SEPTEMBER 2019 - Chemistry**

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| **SEPTEMBER**  Class 11  chemistry | **WEEK 1**  **September (01 - 05)**  Liquefaction of gases  Critical temperature  Kinetic energy, Viscosity  Surface tension  Textbook Questions discussion and Work sheet discussion | **WEEK 2**  **September**  **(08 - 12)**  **THERMODYNAMICS**  System Surroundings, Work, Heat, Energy, State functions. First law of thermodynamics,-internal energy and enthalpy, Heat capacity and specific heat. | **WEEK 3**  **September (15 - 19)**  ASSESSMENT I | **WEEK 4**  **September**  **(22-26)**  ASSESSMENT I | **WEEK 5**  **September (29,30)**  **THERMODYNAMICS**  internal energy and enthalpy, Heat capacity and specific heat. (CONTD./) |
| **PRACTICAL :**   * ANALYSIS OF SALT VI | | | | | |

**ANNUAL SYLLABUS BREAK –UP**

**OCTOBER 2019 - Chemistry**

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| **October**  Class 11  chemistry | **October**  **(1-3)**  internal energy and enthalpy, Heat capacity and specific heat. (CONTD./) | **October**  **(06 - 10)**  Extensive and intensive properties, Hess's law,  Enthalpy of bond dissociation,  Combustion, Formation, Atomization, Sublimation  Second law of Thermodynamics,  Gibb's energy change for spontaneous and non-spontaneous processes, Criteria for equilibrium, | **October**  **(13 - 17)**  Supplementary material -  Third law of Thermodynamics  **EQUILIBRIUM**   * Dynamic equilibrium, Law of mass action,   Equilibrium constant, Factors affecting equilibrium  Ionic Equilibrium in solution,Acids,Bases and salts, Arrhenius concept, | **October**  **(20 - 24)**  Lowry Bronsted concept of Acids and bases. Lewis Acids and bases  Ionisation of acids and bases Ionization of polybasic acids,  Acid strength  Concept of pH,Hydrolysis of salts ,Buffer solution,  Henderson equation  Solubility equilibria  Common ion effect on solubility of salts | **October**  **(27 - 31)**  .  **REDOX REACTIONS**  Concept of oxidation and reduction, Redox reactions. balancing redox reactions in terms of loss and gain of electrons.  Redox reactions as the basis for titrations  Applications of redox reactions  Daniell cell  Standard electrode potential |

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| **ANNUAL SYLLABUS BREAK –UP**  **NOVEMBER 2019 - Chemistry** | | | | | |
| **November**  Class 11  chemistry | **November**  **(3-7)**  **HYDROGEN**  Position of hydrogen in periodic table, occurrence, isotopes, preparation, properties and uses of Hydrogen.  Hydrides-ionic covalent and interstitial.  Physical and chemical properties of water | **November**  **(10 - 14)**  Hard and soft water, Heavy water.  Hydrogen peroxide -preparation, reactions and structure and use. Hydrogen as fuel. | **November**  **(17 - 21)**  **S-BLOCK ELEMENTS**  *Group 1 and Group 2 Elements*  General introduction,  Diagonal relationship,  Trends in the variation of properties,  Trends in chemical reactivity  Uses, General characteristics of compounds of alkali metals, Anomalous properties of Li,Some important chemical compounds of Sodium. , Biological importance of Sodium, Potassium, Group 2 elements,  Biological importance of  Magnesium and Calcium | **November**  **(24 - 28)**  **THE P –BLOCK ELEMENTS**  General *Introduction to Group 13 Elements:* General introduction,  Trends in chemical reactivity,  Boron, Aluminium - physical and chemical properties, important compounds  Uses  *Group 14 Elements:*  Introduction,  Trends in chemical reactivity,  Carbon-catenation, allotropic forms, physical and chemical properties  Uses of Carbon, Compounds of Silicon, Uses: Silicon Tetrachloride, Silicones,  Silicates and Zeolites, their uses. | , |
| **PRACTICAL :**  Analysis of Salt VIII  VOLUMETRIC ANALYSIS –I | | | | | |

**ANNUAL SYLLABUS BREAK –UP**

**DECEMBER 2019 - Chemistry**

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| **DECEMBER**  Class 11  chemistry | **DECEMBER**  **(01 - 05)**  **ORGANIC CHEMISTRY -SOME BASIC PRINCIPLES AND TECHNIQUES**  General introduction, Structural representations of organic compounds Classification of organic compounds | **DECEMBER**  **(08- 12)**  **ASSESSMENT II** | **DECEMBER**  **(15 - 20)**  **ASSESSMENT**  **II** | **DECEMBER**  **(22 - 26)**  **WINTER BREAK** | **DECEMBER**  **(29 - 31)**  WINTER BREAK |
| **PRACTICAL :**   * VOLUMETRIC ANALYSIS - II | | | | | |

**ANNUAL SYLLABUS BREAK –UP**

**JANUARY 2020 - Chemistry**

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| **JANUARY**  Class 11  chemistry | **JANUARY**  **(01 - 02)**  **WINTER BREAK**  **WINTER BREAK** | **JANUARY**  **(8,9)**  ,  Nomenclature of organic compounds Free radicals, carbocations, carbanions, electrophiles and nucleophiles Resonance and hyper conjugation. of organic compounds Electromeric effect, Methods of purification of organic compounds | **JANUARY**  **(12 - 16)**  **HYDROCARBONS**  ***.***  ,Qualitative and quantitative analysis of organic compounds  Alkanes  Nomenclature  Chemical reactions including free radical mechanism  of halogenation, combustion and pyrolysis | **JANUARY**  **(19 - 23)**  Conformations,  Alkenes - Nomenclature, structure of double  bond (ethene), geometrical isomerism  Physical  properties, methods of preparation  Chemical reactions:  Hydrogen halides (Markonikov's addition and peroxide effect). | **JANUARY**  **(26 - 30)**  Electronic displacements in a covalent Chemical reactions: addition of hydrogen, halogen, water Ozonolysis, mechanism of electrophilic addition.  Alkynes  Nomenclature,  preparation and properties  Aromatic Hydrocarbons: IUPAC nomenclature, Resonance, Aromaticity,Chemical properties Carcinogenicity and toxicity. |
| **PRACTICAL :**Assessment | | | | | |

**ANNUAL SYLLABUS BREAK –UP**

**FEBRUARY 2020 - Chemistry**

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| **FEBRUARY**  Class 11  chemistry | **FEBRUARY**  **(02 - 06)**  REVISION | **FEBRUARY**  **(09 - 13)**  REVISION | **FEBRUARY**  **(16 - 20)**  **ASSESSMENT III** | **FEBRUARY**  **(23 - 27)**  ASSESSMENT III |  |

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