



**Pimpri Chinchwad Education Trust's**  
**S. B. Patil College of Science and Commerce**



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| ACA/DI/37          | Teaching Plan ( Academic year 26-27) |
| Date : 08/09/ 2026 | Subject : Chemistry                  |
|                    | XI- Science                          |

| Month  | Lesson No | Lesson's Name                        | Date      | Day  | Topic no. | Topic/ Content                                                                                                                                        |
|--------|-----------|--------------------------------------|-----------|------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aug-26 | 1         | Some basic concepts of Chemistry     | 3-Aug-26  | Mon  | 1         | Introduction, Nature of Chemistry                                                                                                                     |
|        |           |                                      | 4-Aug-26  | Tue  | 2         | Properties of matter and their measurement                                                                                                            |
|        |           |                                      | 5-Aug-26  | Wed  | 3         | Laws Of Chemical Combination, Law of conservation of mass, Law of Definite Proportations, Law of Multiple proportion, Gay Lussac law, Avagadro's law. |
|        |           |                                      | 6-Aug-26  | Thur | 4         | Dalton Atomic Theory, Atomic & Molecular masses, Formula mass                                                                                         |
|        |           |                                      | 7-Aug-26  | Fri  | 5         | Mole Concept, Molar Masses                                                                                                                            |
|        |           |                                      | 8-Aug-26  | Sat  | 6         | Moles and Gases                                                                                                                                       |
|        |           |                                      | 10-Aug-26 | Mon  | 7         | Numericals                                                                                                                                            |
|        | 2         | Introduction to Analytical Chemistry | 11-Aug-26 | Tue  | 1         | Introduction, Analysis, Chemical methods of Qualitative and quantitative analysis                                                                     |
|        |           |                                      | 12-Aug-26 | Wed  | 2         | Mathematical operation and error analysis , Scientific notation, Numericals                                                                           |
|        |           |                                      | 13-Aug-26 | Thur | 3         | Precision & accuracy of Measurement,                                                                                                                  |
|        |           |                                      | 14-Aug-26 | Fri  | 4         | Significant figures, Rules for deciding Significant figures, Calculations with Significant figures                                                    |
|        |           |                                      | 17-Aug-26 | Mon  | 5         | Determination of molecular formula, Percentage composition & empirical formula                                                                        |
|        |           |                                      | 18-Aug-26 | Tue  | 6         | Chemical reactions and stoichiometric calculations , Problems                                                                                         |
|        |           |                                      | 19-Aug-26 | Wed  | 7         | Limiting reagents, Concentration of solution : Mass percent(w/w%)                                                                                     |
|        |           |                                      | 20-Aug-26 | Thur | 8         | Mole fraction(x), Molarity(M), Molality (m)                                                                                                           |
|        |           |                                      | 21-Aug-26 | Fri  | 9         | Use of graph in analysis                                                                                                                              |

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| Sep-26 | 4 | Structure of atom     | 24-Aug-26 | Mon  | 1  | Subatomic particles: Discovery of Proton,electron and Neutron                                                                         |
|        |   |                       | 25-Aug-26 | Tue  | 2  | Atomic number and atomic mass number                                                                                                  |
|        |   |                       | 26-Aug-26 | wed  | 3  | Isotopes, Isobars & Isotones                                                                                                          |
|        |   |                       | 27-Aug-26 | Thur | 4  | Drawbacks of Rutherford atomic model, Wave particle duality, Characteristic of electromagnetic wave                                   |
|        |   |                       | 29-Aug-26 | Sat  | 5  | Bohr's model of Hydrogen atom: Postulates of Bohr atomic theory, Results of Bohr's theory,                                            |
|        |   |                       | 31-Aug-26 | Mon  | 6  | Explanation of the line spectrum of hydrogen using Bohr theory, Limitations of Bohr model, Reasons for failure of the Bohr model      |
|        |   |                       | 1-Sep-26  | Tue  | 7  | Quantum mechanical model of atom: Schrodinger equation                                                                                |
|        |   |                       | 2-Sep-26  | Wed  | 8  | Atomic orbitals and quantum numbers,                                                                                                  |
|        |   |                       | 3-Sep-26  | Thur | 9  | Shapes of atomic orbitals                                                                                                             |
|        |   |                       | 4-Sep-26  | Fri  | 10 | Energies of orbitals, Aufbau principle                                                                                                |
|        |   |                       | 7-Sep-26  | Mon  | 11 | Electronic configuration of atoms and its representation                                                                              |
|        |   |                       | 8-Sep-26  | Tue  | 12 | Condensed orbital notation of electronic configuration, Isoelectronic species                                                         |
|        | 7 | Modern Periodic table | 9-Sep-26  | Wed  | 1  | Introduction, Development of periodic table, Structure of modern periodic table                                                       |
|        |   |                       | 10-Sep-26 | Thur | 2  | Electronic configuration in periods and groups                                                                                        |
|        |   |                       | 11-Sep-26 | Fri  | 3  | Blockwise characteristics of elements                                                                                                 |
|        |   |                       | 12-Sep-26 | Sat  |    | Revision for UT 1                                                                                                                     |
|        |   |                       | 15-Sep-26 | Tue  | 4  | Periodic trends in elemental properties :Effective nuclear charge & screening effect                                                  |
|        |   |                       | 16-Sep-26 | Wed  | 5  | Periodic trends in physical properties : Atomic radius, Ionic radius, Ionization enthalpy, Electron gain enthalpy, Electronegativity. |
|        |   |                       | 17-Sep-26 | Thur | 6  | Periodic trends in chemical properties : Valency, Metallic-nonmetallic character, chemical reactivity                                 |
|        |   |                       | 21-Sep-26 | Mon  | 7  | Revision                                                                                                                              |
|        |   |                       | 22-Sep-26 | Tue  | 1  | Introduction, octet rule, Ionic bond                                                                                                  |

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| Oct-26 | 5 | <b>Chemical Bonding</b>          | 23-Sep-26 | Wed  | 2  | Ionic solids and lattice enthalpy, Covalent bond, , Resonance                                                    |
|        |   |                                  | 24-Sep-26 | Thur | 3  | Lewis structure, Formal charge, Limitations of octet rule                                                        |
|        |   |                                  | 26-Sep-26 | Sat  | 4  | Revision                                                                                                         |
|        |   |                                  | 5-Oct-26  | Mon  | 5  | VBT Theory : Postulates, Interacting forces during covalent bond formation, Overlap of atomic orbitals,VSEPR     |
|        |   |                                  | 6-Oct-26  | Tue  | 6  | Hybridisation, Types of hybridisation and geometry of molecules,                                                 |
|        |   |                                  | 6-Oct-26  | Tue  | 7  | Importance of V.B.T., limitations of V.B.T.                                                                      |
|        |   |                                  | 7-Oct-26  | Wed  | 8  | Molecular orbital theory, Hydrogen bonding                                                                       |
|        |   |                                  | 8-Oct-26  | Thur | 9  | Polar character of covalent bond, Covalent character of ionic bond, Valence bond Theory,                         |
|        |   |                                  | 9-Oct-26  | Fri  | 10 | Formal charge,Limitations of octet rule, Valence bond theory: Postulates of valence bond theory,                 |
|        |   |                                  | 10-Oct-26 | Sat  | 11 | Interacting forces during covalent bond formation, Overlap of atomic orbitals,                                   |
|        |   |                                  | 12-Oct-26 | Mon  | 12 | Valence shell electron pair repulsion theory, Hybridisation, Geometry of molecules                               |
|        |   |                                  | 13-Oct-26 | Tue  | 13 | Valence shell electron pair repulsion theory                                                                     |
|        |   |                                  | 14-Oct-26 | Wed  | 14 | parameters of covalent bond, Polarity of a covalent bond                                                         |
|        |   |                                  | 15-Oct-26 | Thur | 15 | Dipole moment, Covalent character of ionic bond, Resonance                                                       |
|        | 8 | <b>Elements of Group 1 and 2</b> | 16-Oct-26 | Fri  | 1  | Introduction, position of hydrogen in periodic table, Occurrence of hydrogen ( Dihydrogen)                       |
|        |   |                                  | 19-Oct-26 | Mon  | 2  | Isotopes of hydrogen, preparation of dihydrogen, properties of dihydrogen,Uses of dihydrogen                     |
|        |   |                                  | 21-Oct-26 | Wed  | 3  | Alkali metals & elements of group 2: Electronic configuration, trends in atomic & physical properties            |
|        |   |                                  | 22-Oct-26 | Thur | 4  | Chemical properties of elements of group 1& group 2                                                              |
|        |   |                                  | 23-Oct-26 | Fri  | 5  | Uses of elements of group 1& group 2 Biological importance of Na, K, Mg & Ca                                     |
|        |   |                                  | 24-Oct-26 | Sat  | 6  | Some important compounds of elements of s-block : Sodium carbonate,Sodium hydroxide                              |
|        |   |                                  | 26-Oct-26 | Mon  | 7  | Some important compounds of elements of s-block : Calcium carbonate, hydrogen peroxide,Lithium aluminium hydride |
|        |   |                                  | 27-Oct-26 | Tue  | 8  | Some important compounds of elements of s-block : Calcium carbonate, hydrogen peroxide,Lithium aluminium hydride |

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|        |    |                                | 28-Oct-26 | Wed  |   | Revision                                                                                                                           |
| Nov-26 | 9  | Elements of Group 13,14 and 15 | 25-Nov-26 | Wed  | 1 | Introduction, Electronic configuration of elements of groups 13,14 & 15                                                            |
|        |    |                                | 26-Nov-26 | Thur | 2 | Trends in atomic & physical properties of elements of group 13,14 & 15                                                             |
|        |    |                                | 26-Nov-26 | Thur | 3 | Chemical properties of elements of group 13,14 & 15 : Reaction towards air, water and halogens                                     |
|        |    |                                | 27-Nov-26 | Fri  | 4 | Catenation, Allotropy, Allotropes of carbon, Allotropes of phosphorus                                                              |
|        |    |                                | 28-Nov-26 | Sat  | 6 | Molecular structures of some important compounds of the group 13,14 and 15 elements                                                |
|        |    |                                | 28-Nov-26 | Sat  | 7 | Chemistry of notable compounds of elements of group 13,14 and 15 : Borax, silicones, Ammonia : Preparation and chemical properties |
| Dec-26 | 11 | Adsorption & colloids          | 1-Dec-26  | Mon  | 1 | Introduction, Adsorption , Desorption, sorption, Physisorption, Chemisorption                                                      |
|        |    |                                | 1-Dec-26  | Tue  | 2 | Factors affecting adsorption of gases on solids                                                                                    |
|        |    |                                | 2-Dec-26  | Wed  | 3 | Applications of adsorption, Catalysis                                                                                              |
|        |    |                                | 3-Dec-26  | Thur | 4 | Colloids- introduction, colloidal state, classification of colloids, Preparation & Purification of colloids                        |
|        |    |                                | 4-Dec-26  | Fri  | 5 | Properties of colloidal dispersion                                                                                                 |
|        |    |                                | 7-Dec-26  | Mon  | 6 | Emulsions , Types & properties of emulsions, Applications of colloids                                                              |
|        | 3  | Some Analytical Techniques     | 8-Dec-26  | Tue  | 2 | Purification of solids: Crystallization, Fractional Crystallization                                                                |
|        |    |                                | 9-Dec-26  | Wed  | 3 | Simple Distillation, Fractional distillation, Distillation under reduced pressure                                                  |
|        |    |                                | 10-Dec-26 | Thur | 4 | Solvent extraction, Chromatography Techniques: Adsorption Chromatography                                                           |
|        |    |                                | 10-Dec-26 | Thur | 5 | Column chromatography, Thin layer chromatography, Retention factor                                                                 |
|        | 16 | Chemistry in Everyday Life     | 11-Dec-26 | Fri  | 1 | Basics of food chemistry                                                                                                           |
|        |    |                                | 11-Dec-26 | Fri  | 2 | Compounds with medicinal properties : Analgesics, Antipyretics, Antimicrobials                                                     |
|        |    |                                | 14-Dec-26 | Mon  | 3 | Cleansing agents                                                                                                                   |
|        |    |                                | 15-Dec-26 | Tue  | 1 | Introduction, Structural representation of organic compounds, Condensed formula, Bond line formula or zig-zag formula              |

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| Dec-26 | 14 | Basic principles of organic chemistry | 16-Dec-26 | Wed  | 2  | Drawing the molecules in the three dimensions, Wedge formula, Fischer projection formula, Newman projection formula, Sawhorse or andiron or perspective formula |
|        |    |                                       | 17-Dec-26 | Thur | 3  | Classification of organic compounds                                                                                                                             |
|        |    |                                       | 18-Dec-26 | Fri  | 4  | classification based on carbon skeleton, classification based on functional group                                                                               |
|        |    |                                       | 21-Dec-26 | Mon  | 5  | Homologous series, Nomenclature of organic compounds, common /trival names, IUPAC nomenclature, IUPAC names of straight chain alkanes                           |
|        |    |                                       | 22-Dec-26 | Tue  | 6  | IUPAC names of branched saturated hydrocarbons                                                                                                                  |
|        |    |                                       | 23-Dec-26 | Wed  | 7  | IUPAC nomenclature of unsaturated hydrocarbons, IUPAC names of simple monocyclic hydrocarbons,                                                                  |
|        |    |                                       | 24-Dec-26 | Thur | 8  | Naming monofunctional compounds                                                                                                                                 |
|        |    |                                       | 26-Dec-26 | Sat  | 9  | IUPAC nomenclature of compounds containing one or more functional group,                                                                                        |
|        |    |                                       | 1-Jan-27  | Fri  |    | Revision                                                                                                                                                        |
|        |    |                                       | 4-Jan-27  | Mon  | 10 | IUPAC nomenclature of substituted benzene                                                                                                                       |
|        |    |                                       | 5-Jan-27  | Tue  | 11 | Isomerism, structural isomerism                                                                                                                                 |
|        |    |                                       | 6-Jan-27  | Wed  | 13 | Theoretical basis of organic reactions, Types of cleavage of covalent bond                                                                                      |
|        |    |                                       | 7-Jan-27  | Thur | 14 | Types of reagent, Electronic effects in organic reaction , inductive effect                                                                                     |
|        |    |                                       | 11-Jan-27 | Mon  | 15 | Resonance, Resonance structures                                                                                                                                 |
|        |    |                                       | 12-Jan-27 | Tue  | 16 | Resonance effect, Hyperconjugation                                                                                                                              |
|        |    |                                       | 13-Jan-27 | Wed  | 1  | Introduction- Alkane- Structural formula, Isomerism, Conformations of ethane                                                                                    |
|        |    |                                       | 14-Jan-27 | Thur | 2  | Nomenclature                                                                                                                                                    |
|        |    |                                       | 15-Jan-27 | Fri  | 3  | Methods of preparation                                                                                                                                          |
|        |    |                                       | 18-Jan-27 | Mon  | 4  | Chemical Properties of alkanes, Uses of alkanes                                                                                                                 |
|        |    |                                       | 19-Jan-27 | Tue  | 5  | Introduction, Electronic Structure of ethene, Isomerism in alkenes                                                                                              |
|        |    |                                       | 20-Jan-27 | Wed  | 6  | Nomenclature of alkenes, Methods of preparation of alkenes                                                                                                      |
|        |    |                                       | 21-Jan-27 | Thur | 7  | Chemical properties of alkenes, Uses of alkenes                                                                                                                 |

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| Jan-27 | 15 | Hydrocarbons                        | 22-Jan-27 | Fri  | 8  | Introduction of alkynes, electronic structure of ethyne                                               |
|        |    |                                     | 23-Jan-27 | Sat  |    | Nomenclature of alkynes,                                                                              |
|        |    |                                     | 25-Jan-27 | Mon  | 9  | Methods of preparation, Physical properties                                                           |
|        |    |                                     | 27-Jan-27 | Wed  | 10 | Chemical Properties of alkynes, Uses of alkynes                                                       |
|        |    |                                     | 28-Jan-27 | Thur | 11 | Introduction to Aromatic hydrocarbons, Benzene : structure, Stability of benzene                      |
|        |    |                                     | 29-Jan-27 | Fri  | 12 | Aromatic character, Huckel Rule ,Methods of preparation of benzene, Chemical properties of benzene    |
| Feb-27 | 10 | States of matter                    | 1-Feb-27  | Mon  | 1  | Introduction, Intermolecular Forces : Dipole dipole, Ion dipole, Dipole-Induced dipole Interactions   |
|        |    |                                     | 2-Feb-27  | Tue  | 2  | London Dispersion Force, Hydrogen Bonding                                                             |
|        |    |                                     | 3-Feb-27  | Wed  | 3  | Intermolecular forces and thermal energy, Characteristic properties of Gase                           |
|        |    |                                     | 4-Feb-27  | Thur | 4  | The Gas Law- Boyle's law ( P & V relationship), Numericals                                            |
|        |    |                                     | 5-Feb-27  | Fri  | 5  | The Gas Law- Charles's law ( T & V relationship ), Numericals                                         |
|        |    |                                     | 8-Feb-27  | Mon  | 6  | The Gas Law-Gay Lussac's law ( P & T relationship), Numericals                                        |
|        |    |                                     | 9-Feb-27  | Tue  | 7  | Avogadro law, Ideal gas equation, Values of 'R' in different Units, Numericals                        |
|        |    |                                     | 10-Feb-27 | Wed  | 8  | Combined gas law, Relation between Density , Molar mass & pressure of a gaseous substance, Numericals |
|        |    |                                     | 11-Feb-27 | Thur | 9  | Dalton's law of Partial Pressure , Kinetic Molecular Theory of gases : Assumptions                    |
|        | 13 | Nuclear Chemistry and Radioactivity | 12-Feb-27 | Fri  | 1  | Introduction to nuclear chemistry, Classification of nuclides                                         |
|        |    |                                     | 13-Feb-27 | Sat  | 2  | Nuclear binding energy and mass defect                                                                |
|        |    |                                     | 15-Feb-27 | Mon  | 3  | Radioactivity, Radioactive decay, Rate of decay, Rate law, Expression for decay constant              |
|        |    |                                     | 16-Feb-27 | Tue  | 4  | Half life of radioactive element, Graphical representation, Numericals                                |
|        |    |                                     | 17-Feb-27 | Wed  | 5  | Units of radioactivity, Modes of decay , Nuclear reactions,Artificial radioactivity                   |
|        |    |                                     | 18-Feb-27 | Thur | 6  | Nuclear fission, Nuclear fusion, Applications of Radio isotopes                                       |
|        |    |                                     | 22-Feb-27 | Mon  | 1  | Introduction, Oxidizing & reducing Agents,Redox reactions in terms of electron transfer               |

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|        | 6  | <b>Redox reaction</b>       | 23-Feb-27 | Tue  | 2 | Oxidation number, Rules to assign oxidation number, Stock notation,                            |
|        |    |                             | 24-Feb-27 | Wed  | 3 | Redox reactions in terms of oxidation number, Identify Oxidant & Reductant From Redox reaction |
|        |    |                             | 25-Feb-27 | Thur | 4 | Balancing of redox reactions by oxidation number method                                        |
|        |    |                             | 26-Feb-27 | Fri  | 5 | Balancing Chemical equations by Ion electron Method Method,                                    |
| Mar-27 | 12 | <b>chemical equilibrium</b> | 27-Feb-27 | Sat  | 6 | Redox Reaction and electrode potential, standard electrode potential                           |
|        |    |                             | 1-Mar-27  | Mon  | 1 | Introduction, Equilibrium in physical and chemical processes                                   |
|        |    |                             | 2-Mar-27  | Tue  | 2 | Law of mass action, Equilibrium constant, Relationship between $K_p$ & $K_c$                   |
|        |    |                             | 3-Mar-27  | Wed  | 3 | Homogeneous & Heterogeneous equilibria                                                         |
|        |    |                             | 4-Mar-27  | Thur | 4 | Calculation of equilibrium concentrations                                                      |
|        |    |                             | 5-Mar-27  | Fri  | 5 | factors affecting equilibrium, Le Chatelier's principle                                        |

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