

Syllabus / SLOs Coverage plan (2022-23)

| Grade: | XI | | | Subject: | CHEMISTRY | | | | |
|--------|-------------------|----------------|-------------------------|--|----------------------------|---|--|--|--|
| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review | | |
| # | | August - 2022. | | | | | | | |
| 1 | 2 | 10 to 11 | Chapter 1 Stoichiometry | .August-7 | Ashoora -Holiday | | | | |
| | | | | .August-8 | 2% | | | | |
| | | | | .August-9 | | | | | |
| | | | | .August-10 | | | Introduction; 1.1 Mole and Avogadro's Number | | |
| | | | | .August-11 | | | 1.2 Mole Calculations | | |
| | | | | | | | | | |
| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review | | |
| # | | August - 2022. | | | | | | | |
| 2 | 4 | 14 to 18 | Chapter 1 Stoichiometry | .August-14 | Independence day - Holiday | | | | |
| | | | | .August-15 | 6% | | | | |
| | | | | .August-16 | | | 1.2 Mole Calculations | | |
| | | | | .August-17 | | | 1.3 Percentage Composition | | |
| | | | | .August-18 | | | 1.4 Excess and Limiting Reagents | | |
| | | | | 1.5 Theoretical Yield and Actual Yield as percentage | | | | | |
| | | | | | | | | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|----------------|----------------------------|---|--------------------------------|-----|--------|
| # | | August - 2022. | | | | | |
| 3 | 5 | 21 to 25 | Chapter 2 Atomic Structure | .August-21 | Exercise questions and Answers | 10% | |
| | | .August-22 | | 2.1 Discharge Tube Experiments | | | |
| | | .August-23 | | 2.1 Discharge Tube Experiments | | | |
| | | .August-24 | | 2.2.1 Derivation of Radius, Energy, Frequency, Wave Length, Wave Number | | | |
| | | .August-25 | | 2.2 Application of Bohr's Model | | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review | |
|------|-------------------|----------|----------------------------|------------|--|-----|--------|--|
| # | Aug/ Sep - 2022. | | | | | | | |
| 4 | 5 | 28 to 1 | Chapter 2 Atomic Structure | .August-28 | 2.2.2 Spectrum of Hydrogen Atom | 14% | | |
| | | | | .August-29 | 2.2.3 Defects of Bohr's Theory | | | |
| | | | | .August-30 | 2.3 Planck's Quantum Theory_2.3.1 Postulates With Derivation of E =hcv | | | |
| | | | | .August-31 | 2.4 X-Rays,Production, Properties and Uses, | | | |
| | | | | .Sept:1 | 2.4.4 Moseley's Experiment,2.4.5 Moseley's Law | | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|---------------|----------------------------|--|---|-----|--------|
| # | | Sept: - 2022. | | | | | |
| 5 | 5 | 4 to 8 | Chapter 2 Atomic Structure | .Sept:-4 | 2.5 Quantum Numbers and Orbitals,2.5.1 Principle Quantum Number | 18% | |
| | | .Sept:-5 | | 2.5.2>4 Azimuthal, Magnetic and spin Quantum Numbers | | | |
| | | .Sept:-6 | | 2.5.5 Shapes of s, p and d Orbitals | | | |
| | | .Sept:-7 | | 2.6 Electronic Configuration and Rules | | | |
| | | .Sept:-8 | | Exercise questions; answers and Activities | | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|---------------|--|-----------|--|-----|--------|
| # | | Sept: - 2022. | | | | | |
| 6 | 5 | 11 to 15 | Chapter 3 Theories of Covalent Bonding and Shapes of molecules | Sept:- 11 | Introduction-3.1 Shapes of molecules; 3.1.1 VSEPR | 23% | |
| | | | | Sept:- 12 | 3.1.2 Resonance | | |
| | | | | Sept:- 13 | 3.2 Theories of covalent bonding; 3.2.1 VBT and hybridization | | |
| | | | | Sept:- 14 | 3.2.2. MOT | | |
| | | | | Sept:- 15 | Molecular Orbital Theory and Activities | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|---------------|--|-----------|--|-----|--------|
| # | | Sept: - 2022. | | | | | |
| 7 | 5 | 18 to 22 | Chapter 3 Theories of Covalent Bonding and Shapes of molecules | .Sept: 18 | 3.3 Bond Characteristics: 3.3.1 Bond Energy | 27% | |
| | | | | .Sept: 19 | 3.3.2 Bond Length | | |
| | | | | .Sept: 20 | 3.3.3 Ionic Character | | |
| | | | | .Sept: 21 | 3.3.4 Dipole Moment | | |
| | | | | .Sept: 22 | 3.4 Effect of Bonding on Physical and Chemical Properties... Solubility | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|---------------|----------------------------|--|---|-----|--------|
| # | | Sept: - 2022. | | | | | |
| 8 | 5 | 25 to 29 | Chapter 4 States of Matter | .Sept: 25 | 3.4.2>3 Reactions and directional character of Ionic and Covalent Compounds | 35% | |
| | | .Sept: 26 | | Exercise questions; answers and Activities | | | |
| | | .Sept: 27 | | Introductio.4.1 Kinetic Molecular Theory of Gases.4.1.1 Postulates of KMT | | | |
| | | .Sept: 28 | | 4.1.2 Pressure and Its Units | | | |
| | | .Sept: 29 | | 4.2.1 Brief recall of Boyle's and Charles' Law | | | |

| Week | # of Working days | From--T0 | Chapter# 7 | Date | Topics | % | Review |
|------|-------------------|-------------|----------------------|-----------|--|-----|--------|
| # | | Nov:- 2022. | | | | | |
| 15 | 5 | 13 to 17 | Chemical Equilibrium | .Nov: -13 | 7.1.3 Relationship between Kc, Kp, Kx, Kn;7.1.4 Importance of Kc | 68% | |
| | | | | .Nov: -14 | 7.2 Factors Affecting Equilibrium (Le-Chatelier's Principle) | | |
| | | | | .Nov: -15 | 7.3 Industrial Application of Le-Chatelier's Principle (Haber's Process) | | |
| | | | | .Nov: -16 | 7.4 Solubility Product and Precipitation Reactions | | |
| | | | | .Nov: -17 | 7.5 Common Ion Effect; Exercise questions; answers and Activities | | |

| Week | # of Working days | From--T0 | Chapter#8 | Date | Topics | % | Review |
|------|-------------------|-------------|------------------------|-----------|--|-----|--------|
| # | | Nov:- 2022. | | | | | |
| 16 | 5 | 20 to 24 | Acids, Bases and Salts | .Nov:- 20 | Introduction: 8.1 Acidic, Basic and Amphoteric Substances | 70% | |
| | | | | .Nov:- 21 | 8.2 Bronsted-Lowery Definitions of Acids and Bases | | |
| | | | | .Nov:- 22 | 8.3 Conj. Acid-Base Pairs;8.4 Expressing Strength of Acids and Bases;8.4.1 Ionization Equation of Water;8.4.2 pH, pOH and pKw | | |
| | | | | .Nov:- 23 | 8.4.3 Acid Ionization Constant, Ka and pKa | | |
| | | | | .Nov:- 24 | 8.4.4 Leveling Effect;8.4.5 Base Ionization Constant, Kb and pKb;8.4.6 Relationship of Ka and Kb | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|-------------------|---------|-----------|-----------------------------|---|--------|
| # | | Nov / Dec:- 2022. | | | | | |
| 17 | Nil | 27 to 1 | | .Nov:- 27 | Oman National Day- Holidays | | |
| | | | | .Nov:- 28 | | | |

Sendup Examination - From November 29, 2022 to December 15, 2022

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|--------------|------------------------|-----------|---|-----|--------|
| # | | Dec: - 2022. | | | | | |
| 18 | 5 | 18 to 22 | Acids, Bases and Salts | .Dec: -18 | 8.5 Lewis Definitions of Acids and Bases | 72% | |
| | | | | .Dec: -19 | 8.6 Buffer Solutions and their Applications | | |
| | | | | .Dec: -20 | 8.7 Salt Hydrolysis | | |
| | | | | .Dec: -21 | Exercise questions; answers and Activities | | |
| | | | | .Dec: -22 | Exercise questions; answers and Activities | | |

Winter Vacation from December 22 to January 5, 2023

| Week | # of Working days | From--T0 | Chapter# 9 | Date | Topics | % | Review |
|------|-------------------|----------------|-------------------|-----------|--|-----|--------|
| # | | January- 2023. | | | | | |
| 19 | 5 | 8 to 12 | Chemical Kinetics | .Jan:- 8 | Introduction: 9.1 Chemical Kinetics; 9.2 Rates of Reactions | 75% | |
| | | | | .Jan:- 9 | 9.2.1 Rate law ;9.2.2 Elementary and overall Rate Constant and Units | | |
| | | | | .Jan:- 10 | 9.2.3 Order of Reaction and its Determination | | |
| | | | | .Jan:- 11 | 9.2.4 Factors Affecting Rate of Reaction | | |
| | | | | .Jan:- 12 | 9.3 Collision Theory, Transition State and Activation Energy | | |

| Week | # of Working days | From--T0 | Chapter# 9/10 | Date | Topics | % | Review |
|------|-------------------|----------------|-----------------------------------|-----------|---|-----|--------|
| # | | January- 2023. | | | | | |
| 20 | 5 | 15 to 19 | Chapter 10 Solutions and Colloids | .Jan:- 15 | 9.4 Catalysis; 9.4.1 Characteristics of Catalysts | 80% | |
| | | | | .Jan:- 16 | 9.4.2,3,4:Homogeneous & Heterogeneous Catalysis;Enzyme Catalysis | | |
| | | | | .Jan:- 17 | Exercise questions; answers and Activities | | |
| | | | | .Jan:- 18 | 10.1 General Properties of Solutions;10.1.1 Solution, Suspension and Colloids | | |
| | | | | .Jan:- 19 | 10.1.2 Hydrophilic and Hydrophobic Molecules | | |

| Week | # of Working days | From--T0 | Chapter#10 | Date | Topics | % | Review |
|------|-------------------|----------------|------------------------|-----------|---|-----|--------|
| # | | January- 2023. | | | | | |
| 21 | 5 | 15 to 19 | Solutions and Colloids | .Jan:- 22 | 10.1.4 The Effect of Temperature and Pressure on Solubility | 85% | |
| | | | | .Jan:- 23 | 10.2 Concentration Units;10.2.1>4:Percent; Molarity;10. Molality; Mole fraction | | |
| | | | | .Jan:- 24 | 10.2.5 Parts per million, billion, and trillion: 10.3 Raoult’s Law | | |
| | | | | .Jan:- 25 | 10.4 Colligative Properties of dilute Solutions;10.4.1 Vapour Pressure Lowering | | |
| | | | | .Jan:- 26 | 10.4.2 Boiling Point Elevation and Freezing Point Depression | | |

| Week | # of Working days | From--T0 | Chapter# 10/11 | Date | Topics | % | Review |
|------|-------------------|-----------------|-----------------|---|---|-----|--------|
| # | | Jan/ Feb- 2023. | | | | | |
| 22 | 5 | 29 to 02 | Thermochemistry | .Jan:- 29 | 10.4.3 Molar Mass Determination by Vapor Pressure Lowering, Boiling Point Elevation and Freezing Point Depression | 90% | |
| | | .Jan:- 30 | | 10.4.4 Osmotic Pressure and Reverse Osmosis | | | |
| | | .Jan:- 31 | | 10.5 Colloids;10.5.1 Properties of Colloids;10.5.2 Types of Colloids | | | |
| | | .Feb:- 1 | | 11.1>3: Energy in Chemical Reactions;Thermodynamics; Internal Energy; | | | |
| | | .Feb:- 2 | | 11.4 First Law of Thermodynamics | | | |

| Week | # of Working days | From--T0 | Chapter# 11/12 | Date | Topics | % | Review |
|------|-------------------|-----------------|-----------------|---|---|-----|--------|
| # | | February- 2023. | | | | | |
| 23 | 5 | 5 to 9 | Thermochemistry | .Feb:- 5 | 11.5 Standard State and Standard Enthalpy Changes | 95% | |
| | | .Feb:- 6 | | 11.6 Heat Capacity; 11.7 Calorimeter | | | |
| | | .Feb:- 7 | | 11.8 Hess's Law: Enthalpy Change Calculations | | | |
| | | .Feb:- 8 | | 11.9 Born Haber Cycle | | | |
| | | .Feb:- 9 | | 12.1 Oxidation-Reduction Concepts | | | |

| Week | # of Working days | From--T0 | Chapter# 12 | Date | Topics | % | Review |
|------|-------------------|-----------------|------------------|--|---|------|--------|
| # | | February- 2023. | | | | | |
| 24 | 5 | 12 to 16 | Electrochemistry | .Feb:- 12 | 12.1.4 Balancing Oxidation Reduction Equations by Oxidation Number Method | 100% | |
| | | .Feb:- 13 | | 12.1.5 Balancing Oxidation Reduction Equations by the Half Reaction Method | | | |
| | | .Feb:- 14 | | 12.2 Electrode, Electrode Potential and Electrochemical Series | | | |
| | | .Feb:- 15 | | 12.3 Types of Electrochemical Cells | | | |
| | | .Feb:- 16 | | 12.3.1 Electrolytic Cells;12.3.2 Electrolysis of Aqueous NaCl | | | |

Completion of Syllabus till February , 2023

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|-----------------|---------|---|---|---|--------|
| # | | February- 2023. | | | | | |
| 25 | 3 | 19 to 23 | | .Feb:- 19 | 12.3.3 Voltaic Cells;12.3.3.1 Standard State Cell Potential for Voltaic Cell;12.3.3.2 Standard State Reduction Half Cell Potential | | |
| | | .Feb:- 20 | | 12.3.3.3 Standard State Cell Potentials and Spontaneous Reaction | | | |
| | | .Feb:- 21 | | 12.3.4 Batteries;12.3.4.1 Primary Batteries;12.3.4.2 Secondary Batteries | | | |
| | | .Feb:- 22 | | 12.3.4.3 Fuel Cells | | | |
| | | .Feb:- 23 | | 12.3.5 Corrosion and its Prevention | | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|------------|---------|-----------|----------|---|--------|
| # | Feb/ Mar: - 2023. | | | | | | |
| 26 | 5 | 26 to 2 | | .Feb:- 26 | Revision | | |
| | | .Feb:- 27 | | Revision | | | |
| | | .Feb:- 28 | | Revision | | | |
| | | .March:- 1 | | Revision | | | |
| | | .March:- 2 | | Revision | | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|----------------|---------|------------------------|------------------------|---|--------|
| # | | March: - 2023. | | | | | |
| 27 | 5 | 5 to 9 | | .March: - 5 | Revision / Test Series | | |
| | | .March: - 6 | | Revision / Test Series | | | |
| | | .March: - 7 | | Revision / Test Series | | | |
| | | .March: - 8 | | Revision / Test Series | | | |
| | | .March: - 9 | | Revision / Test Series | | | |

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| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|----------------|---------|--------------|------------------------|---|--------|
| # | | March: - 2023. | | | | | |
| 28 | 5 | 12 to 16 | | .March: - 12 | Revision / Test Series | | |
| | | | | .March: - 13 | Revision / Test Series | | |
| | | | | .March: - 14 | Revision / Test Series | | |
| | | | | .March: - 15 | Revision / Test Series | | |
| | | | | .March: - 16 | Revision / Test Series | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|----------------|---------|------------------------|------------------------|---|--------|
| # | | March: - 2023. | | | | | |
| 29 | 4 | 19 to 23 | | .March: - 19 | Revision / Test Series | | |
| | | .March: - 20 | | Revision / Test Series | | | |
| | | .March: - 21 | | Revision / Test Series | | | |
| | | .March: - 22 | | Revision / Test Series | | | |
| | | .March: - 23 | | Pakistan Day- Holiday | | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|------|-------------------|----------------|---------|------------------------|------------------------|---|--------|
| # | | March: - 2023. | | | | | |
| 30 | 5 | 26 to 30 | | .March: - 26 | Revision / Test Series | | |
| | | .March: - 27 | | Revision / Test Series | | | |
| | | .March: - 28 | | Revision / Test Series | | | |
| | | .March: - 29 | | Revision / Test Series | | | |
| | | .March: - 30 | | Revision / Test Series | | | |

| Week | # of Working days | From--T0 | Chapter | Date | Topics | % | Review |
|--------------------------------|-------------------|--------------|---------|------------------------|------------------------|---|--------|
| # | | April- 2023. | | | | | |
| 34 | 5 | 23 to 27 | | .April:- 23 | Revision / Test Series | | |
| | | .April:- 24 | | Revision / Test Series | | | |
| | | .April:- 25 | | Revision / Test Series | | | |
| | | .April:- 26 | | Revision / Test Series | | | |
| | | .April:- 27 | | Revision / Test Series | | | |
| Pre- Board- XI- XII, May- 2023 | | | | | | | |