



EXAMINATION SYLLABUS 2020-2021

Grades: XI

Subject: Chemistry

This exam syllabus is produced to facilitate teachers, students and the test setters to teach, learn and assess subject specific learning. This syllabus is condensed to align the course content with the teaching learning time during COVID 19.

DETAIL SYLLABUS

TOPICS / THEMES	STUDENT LEARNING OUTCOMES	COGNITIVE LEVELS		
		K	U	A
1. Introduction to chemistry	1.2: Significant figure (pg. no 2-3)			
	1.5: Empirical formula (pg.no 11-15)			
	1.6: Molecular formula (pg.no 15-18)			
	1.8: Calculations based on chemical equations pg.no (19-24)			
2. Three States of matter	2.1: Kinetic Theory (pg.no 30-31)			
	2.3: Gas Law (pg.no 34-50)			
	2.7: Viscosity (pg.no 53-54)			
	2.8: Surface Tension (pg.no 54-56)			
	2.9: Vapour Pressure (pg.no 56-57)			
	2.12: Types of crystals (pg.no 62-64)			
	2.13: Isomorphism (pg.no 64-65)			
	2.14: Polymorphism (pg.no 65)			
3: The Atomic Structure	3.2: Discovery of Electron (pg.no 74-78)			
	3.4: Radioactivity (pg.no 79-81)			
	3.5: Discovery of Neutron (pg.no 81)			
	3.7: Plank's Quantum Theory (pg.no 82)			
	3.8: Spectra (pg.no 82-84)			
	3.11: Bohr's Theory (pg.no 88-90)			
	3.12: Bohr's Theory and Hydrogen Atom (pg.no 90-92)			
	3.13: Determination of Energy (pg.no 92-95)			
3.15: Heisenberg's uncertainty principle (pg.no 98-99)				

	3.16: Energy Sub Levels (pg.no 99-100)			
	3.17: Orbitals and Quantum numbers (pg.no 100-101)			
	3.18: Pauli's Exclusion principle (pg.no101-102)			
	3.19: Shapes of Orbitals (pg.no 102-104)			
	3.20: Electronic Configuration (pg.no 104)			
4. Chemical Bonding	4.5: Dipole Moment (pg.no 125-127)			
	4.7: Bond Energy (pg.no 129-130)			
	4.8: Sigma and Pi Bond (pg.no 130-136)			
	4.9: Hybridization (pg.no 136-142)			
	4.10: Shape of simple Molecules (pg.no 142-150)			
	4.11: Hydrogen Bond (pg.no 150-153)			
5. Energetics of Chemical Reactions	5.1: Thermodynamic Terms system; surroundings and state (pg.no 155-156)			
	5.2: First Law of Thermodynamics (pg.no 156-159)			
	5.5: Hess's Law of constant Heat summation (pg.no 159-161)			
	5.6: Heat of Formation (pg.no 161-162)			
6. Chemical Equilibrium	6.2: Equilibrium State (pg.no 165-166)			
	6.3: The law of Mass Action (pg.no 166-168)			
	6.4: Determination of Equilibrium Constant (pg.no168-173)			
	6.5: Applications of The Law Equilibrium (pg.no174-180)			
	6.6: Factors Affecting Balance of Chemical Equilibrium; Le Chatelier's Principle (pg.no180-182)			
7. Solutions and Electrolytes	7.2: Hydration (pg.no 193-195)			
	7.3: Hydrolysis (pg.no 195-196)			
	7.4: Theory of Ionization (pg.no 196-199)			
	7.7: Oxidation Number (pg.no 207-211)			
	7.8: Oxidation and Reduction Reactions (pg.no 211)			
	7.9: Balancing Oxidation-Reduction Equations; Ion-Electron Method (pg.no 212-216)			
	7.10: Indicators (pg.no 216-217)			
8. Introduction to Chemical Kinetics	8.1: Rate and Velocity of Reaction (pg.no 226-231)			
	8.5: Factors affecting Rate of Reaction (pg.no 234-241)			

