

TABLE OF SPECIFICATIONS CHEMISTRY 9TH

Chapter #	Chapter Name	Topics/Sub-Topics	Items	Item + Marks	SLOs Selected	Item Cognitive level			Item Difficulty level			
						Items	K	U	A	E	M	D
1	Fundamentals of Chemistry	Elements, Compounds and Mixtures/Moles, Avogadro Numbers, Atomic Numbers, Mass Numbers/Molecular Mass	MCQs RRQs ERQs	2(2) 1(4) 1(3) <hr/> 09	Differentiate among Elements/Compound and Mixture, Describe how Avogadro's No. is related to mole of any Substance, Define Atomic No., Change Atomic Mass/Molecular Mass/Formula Mass into Gram Molecular Mass	MCQs	✓	-	-	-	✓	-
						RRQs	✓	-	-	-	✓	-
						ERQs	-	-	✓	✓	-	-
2	Structure of an Atom	Structure of Atom, Rutherford Atomic Model, Electronic Configuration, concept of S and P sub shell.	MCQs RRQs ERQs	1(1) 1(4) 1(4) <hr/> 09	Describe the Contribution that Rutherford made for development of Atomic Theory, Describe the Structure of Atom including location of Proton Electron and Neutron, Write Electronic Configuration for 18 Elements, Distinguish between Shells and Sub Shells	MCQs	-	✓	-	-	✓	-
						RRQs	-	✓	-	-	✓	-
						ERQs	-	-	✓	-	-	✓
3.	Periodic Table & Periodicity of Properties	Groups and Periods, Electronegativity, Trends of Electronegativity, atomic size / atomic radii and covalent radii	MCQs RRQs ERQs	1(1) 2(4) 1(3) <hr/> 12	Distinguish between Period and Groups in the Periodic Table, describe how Electronegativity, changes within a group and within a period in a Periodic Table, describe atomic radii and covalent radii	MCQs	-	-	✓	✓	-	-
						RRQs	-	-	✓	-	✓	-
						ERQs	-	✓	-	-	✓	-
4.	Structure of Molecules	Valence concept / covalent bond /Lewis structure / covalent bond and coordinate covalent bond.	MCQs RRQs ERQs	2(2) 2(8) 1(4) <hr/> 14	Describe the Formation of Ions/ state octet and duplet rule. Describe formation of covalent bond between two non-metallic elements. Draw Lewis Structure	MCQs	✓	-	✓	✓	-	-
						RRQs	-	✓	✓	-	-	✓
						ERQs	-	✓	-	-	✓	-

5.	Physical States of Matter	Properties of Gases, Diffusion, Properties of liquid, Boiling Point, evaporation	MCQs RRQs ERQs	$\frac{1(1) + 1(4) + 1(3)}{08}$	Explain the Properties of Gases, Summarize the properties of liquids like Evaporation, Vapour pressure and boiling point.	MCQs	-	✓	-	✓	-	-
						RRQs	-	✓	-	-	✓	-
						ERQs	-	✓	-	-	✓	-
6.	Solutions	Molarity, Types of Solution, composition of solution, Colloids and Suspension	MCQs RRQs ERQs	$\frac{2(2) + 2(4) + 1(4)}{14}$	Define molarity, Solve problems involving Molarity, Explain formation of Solutions, Define colloids and suspension, explain formation of solution.	MCQs	✓	✓	-	✓	-	-
						RRQs	✓	-	✓	-	✓	-
						ERQs	-	-	✓	-	✓	-
7.	Electrochemistry	Concept of electrolyte , oxidation state/oxidizing and reducing agents, Electrolytic Cells /Daniel Cell	MCQs RRQs ERQs	$\frac{2(2) + 1(4) + 1(4)}{10}$	Identify movements of ions, define oxidation state, define oxidizing and reducing agents in a Redox Reaction. Sketch a Daniell Cell labeling the cathode, the anode and the direction of flow of electrons.	MCQs	✓	-	✓	✓	-	-
						RRQs	✓	-	-	-	✓	-
						ERQs	-	✓	-	-	-	✓
8.	Chemical Reactivity	Metals, Properties of Metals, Soft and Hard Metals, inertness of Noble metals	MCQs RRQs ERQs	$\frac{1(1) + 1(4) + 1(3)}{08}$	Differentiate between Soft and Hard Metals, Explain alkali Metals, describe inertness of noble metals	MCQs	✓	-	-	-	✓	-
						RRQs	-	✓	-	✓	-	-
						ERQs	-	✓	-	-	✓	-