SI No.	Topics	No. of Questions
f.	Electric Current: Kirchhoff's law, Wheatstone-bridge, meter-bridge, potentiometer	
g.	<b>Optics:</b> Microscope & telescope, interference, diffraction & Polarisation, polarimeter.	
h.	Atom: Bohr's model of H-atom.	
i.	Nuclei: Mass defect, nuclear binding energy, nuclear fission & fusion.	
j.	Semi-conductor Electronics: PN junction, transistor, logic gates, diode as a rectifier, zener diode.	
CHEMISTRY		
	Unit – 1 – Periodic Table & Atomic Properties:	2
Fundar Pauli's table, V	nental particles of an atom (electron, proton, neuron), Rutherford's nuclear model, Quantum Nos., exclusion principle, Aufbau principle, Types of orbital (s, p, d, f) shape of orbital, Hund's rule, Modern periodic 'ariation in atomic properties (Size, ionization, potential, Electron affinity, Electronegativity)	
	Unit – 2 – s-Block & p-Block Elements	2
Genera proper	Il introduction, Electronic configuration, Occurrence, Oxidation states, Trends in Physical & Chemical ties, Inert pair effect	
	Unit – 3 – Chemical Equilibrium	2
Factors affecting Equilibrium, Reversible and Irreversible reactions, Laws of chemical Equilibrium, Le Chatelier's principle		
	Unit – 4 – Ionic Equilibrium	2
Acid base equilibrium, Ph Value, Common ion effect, Buffer solutions, Acid Base titration		
	Unit – 5 – Gaseous State	2
Properties, Boyle's Law, Charles Law, Avogadro's Law, Dalton's Law, Ideal gas equation, Graham's law of diffusion, Kinetic theory of gases		
	Unit – 6 – Liquid State	2
Properties of liquids, Vapour pressure, Surface tension, Viscosity		
	Unit – 7 – Solid State	2
Proper compo	ties of solids, Classification of solids, Unit cells & their types, Packing of crystals, Structure of simple ionic unds	
	Unit – 8 – Solutions	2
Solute, weight ideal so	Solvent, Solution, Concentration of solutions (Molarity, Normality, Formality, Molality, Mole fraction, percent), Types of solutions (Gas solutions, Liquid solutions, Solid solutions, Raoult's Law, Ideal & Non- plutions, Colligative properties of solutions	
	Unit – 9 – Nomenclature & General Properties of Organic Compounds	2
Rules c Nucleo (structi	f IUPAC nomenclature, Types of reactions (Substitution, Addition, Elimination), Electrophiles, philes, Inductive effect, Electromeric effect, Resonance, Hyperconjugation, Steric effect, Isomerism ural & stereo)	
	Unit – 10 – Hydrocarbons	2
Definit proper	ion & types of hydrocarbons (Alkane, Alkene, Alkyne, Arene), Preparation of hydrocarbons, Physical ties, Chemical properties	
	TOTAL	50

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## ANNEXURE-XVII

## LIBRARIAN

SI No.	Topics	No. of Questions
Ι.	Universe of knowledge, Structure and Attributes, Modes of formation of subjects, Different types of	12 to 14
	subjects, Universe of subjects as mapped in different schemes of Classification.	
П.	Bibiolographic description, Catalog purpose, structure and types, Physical forms including OPAC filling	12 to 14
	rules, Normative principals of cataloging, Overview of principles of practice in document description,	
	Current trends in standardization, Description and exchange, Standard course of cataloging.	
111.	Method of knowledge organization, General knowledge of world and India, General theory of Library classification, Normative principles of classification and their applications, Species of Library classification, Standard schemes of classification and there features, CC, EDC, UDC, Notation: [need, functions, characteristics], Design and development of schemes library classification, Standard sub-division index, Trends in Library classification.	12 to 14
VI.	Subject Classification, Educational psychology, Principles of subject classification.	8 to 12
	TOTAL	50

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