

CONTENTS

- Previous Years' Solved Papers

PART 'A'

General Aptitude	1–96
-------------------------	-------------

PART 'B'

Unit-1 : Atomic Structure	3–58
Unit-2 : Acids and Bases	59–74
Unit-3 : Redox Reactions	75–93
Unit-4 : Introductory Energetics and Dynamic of Chemical Reactions	94–115
Unit-5 : Aspects of <i>s</i> -, <i>p</i> -, <i>d</i> - and <i>f</i> - Block Elements	116–177
Unit-6 : IUPAC Nomenclature of Simple Organic and Inorganic Compounds ...	178–189
Unit-7 : Stereochemistry : Concept of Chirality	190–208
Unit-8 : Common Organic Reactions and Mechanisms	209–235
Unit-9 : Elementary Principles and Applications of Spectral Techniques	236–256
Unit-10 : Data Analysis	257–264

PART 'C'

Unit-1 : Quantum Chemistry.....	3–22
Unit-2 : The Variation Method and Perturbation Theory.....	23–34
Unit-3 : Born Oppenheimer Approximation, MO, VB.....	35–48
Unit-4 : Group Theoretical Representations and Quantum Mechanics	49–62
Unit-5 : Spectroscopy : Theoretical Treatment of Rotational, Vibrational and Electronic Spectroscopy, Principles of Magnetic Resonance, Mossbauer and Photoelectron Spectroscopy.....	63–76
Unit-6, 7 : Thermodynamics and Chemical Equilibrium.....	77–103
Unit-8 : Ideal and Non-ideal Solutions.....	104–116
Unit-9 : Electrochemistry.....	117–130
Unit-10 : Surface Phenomenon.....	131–140
Unit-11 : Statistical Thermodynamics.....	141–153
Unit-12 : Non-equilibrium Thermodynamics.....	154–159
Unit-13 : Reaction Kinetics.....	160–182
Unit-14 : Fast Reactions.....	183–189

Unit-15	: Macromolecules.....	190–200
Unit-16	: Solids.....	201–212
Unit-17	: Nuclear Chemistry.....	213–232
Unit-18	: Chemistry of Non-transition Elements	233–292
Unit-19	: Chemistry of Transition Elements.....	293–353
Unit-20	: Chemistry of Lanthanides and Actinides.....	354–362
Unit-21	: Organometallic Chemistry of Transition Elements.....	363–397
Unit-22	: Analytical Chemistry.....	398–415
Unit-23	: Bio-inorganic Chemistry.....	416–442
Unit-24	: Aromaticity.....	443–449
Unit-25	: Stereochemistry and Conformational Analysis.....	450–468
Unit-26	: Selective Organic Name Reactions.....	469–505
Unit-27	: Mechanism of Organic Reactions.....	506–521
Unit-28	: Pericyclic Reactions.....	522–541
Unit-29	: Heterocyclic Chemistry	542–556
Unit-30	: Reagents in Organic Synthesis.....	557–584
Unit-31	: Chemistry of Natural Products	585–608
Unit-32	: Bio-organic Chemistry.....	609–622
Unit-33	: Photochemistry.....	623–639
Unit-34	: Spectroscopy.....	640–667

Interdisciplinary Topics

1.	Chemistry in Nanoscience and Technology.....	3–9
2.	Catalysis and Green Chemistry.....	10–17
3.	Medicinal Chemistry.....	18–30
4.	Supramolecular Chemistry.....	31–37
5.	Environmental Chemistry.....	38–48
●	Part-B—Multiple Choice Questions.....	1–54
●	Part-C—Multiple Choice Questions.....	55–119