

Chemistry

Part II

Textbook for Class XI



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FOREWORD

The National Curriculum Framework (NCF), 2005 recommends that children's life at school must be linked to their life outside the school. This principle marks a departure from the legacy of bookish learning which continues to shape our system and causes a gap between the school, home and community. The syllabi and textbooks developed on the basis of NCF signify an attempt to implement this basic idea. They also attempt to discourage rote learning and the maintenance of sharp boundaries between different subject areas. We hope these measures will take us significantly further in the direction of a child-centred system of education outlined in the National Policy on Education (1986).

The success of this effort depends on the steps that school principals and teachers will take to encourage children to reflect on their own learning and to pursue imaginative activities and questions. We must recognise that, given space, time and freedom, children generate new knowledge by engaging with the information passed on to them by adults. Treating the prescribed textbook as the sole basis of examination is one of the key reasons why other resources and sites of learning are ignored. Inculcating creativity and initiative is possible if we perceive and treat children as participants in learning, not as receivers of a fixed body of knowledge.

These aims imply considerable change in school routines and mode of functioning. Flexibility in the daily time-table is as necessary as rigour in implementing the annual calendar so that the required number of teaching days are actually devoted to teaching. The methods used for teaching and evaluation will also determine how effective this textbook proves for making children's life at school a happy experience, rather than a source of stress or boredom. Syllabus designers have tried to address the problem of curricular burden by restructuring and reorienting knowledge at different stages with greater consideration for child psychology and the time available for teaching. The textbook attempts to enhance this endeavour by giving higher priority and space to opportunities for contemplation and wondering, discussion in small groups, and activities requiring hands-on experience.

The National Council of Educational Research and Training (NCERT) appreciates the hard work done by the textbook development committee responsible for this book. We wish to thank the Chairperson of the advisory group in science and mathematics, *Professor J.V. Narlikar* and the Chief Advisor for this book, *Professor B. L. Khandelwal* for guiding the work of this committee. Several teachers contributed to the development of this textbook; we are grateful to their principals for making this possible. We are indebted to the institutions and organisations which have generously permitted us to draw upon their resources, material and personnel. We are especially grateful to the members of the National Monitoring Committee, appointed by the Department of Secondary and Higher Education, Ministry of Human Resource Development under the Chairpersonship of Professor Mrinal Miri and Professor G.P. Deshpande, for their valuable time and contribution. As an organisation committed to systemic reform and continuous improvement in the quality of its products, NCERT welcomes comments and suggestions which will enable us to undertake further revision and refinement.

New Delhi
20 December 2005

Director
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CONTENTS

	FOREWORD	iii
Unit 8	Redox Reactions	263
8.1	Classical Idea of Redox Reactions-Oxidation and Reduction Reactions	263
8.2	Redox Reactions in Terms of Electron Transfer Reactions	265
8.3	Oxidation Number	267
8.4	Redox Reactions and Electrode Processes	277
Unit 9	Hydrogen	284
9.1	Position of Hydrogen in the Periodic Table	284
9.2	Dihydrogen, H ₂	285
9.3	Preparation of Dihydrogen, H ₂	286
9.4	Properties of Dihydrogen	286
9.5	Hydrides	288
9.6	Water	289
9.7	Hydrogen Peroxide (H ₂ O ₂)	293
9.8	Heavy Water, D ₂ O	294
9.9	Dihydrogen as a Fuel	294
Unit 10	The s-Block Elements	299
10.1	Group 1 Elements: Alkali Metals	300
10.2	General Characteristics of the Compounds of the Alkali Metals	303
10.3	Anomalous Properties of Lithium	304
10.4	Some Important Compounds of Sodium	304
10.5	Biological Importance of Sodium and Potassium	306
10.6	Group 2 Elements : Alkaline Earth Metals	306
10.7	General Characteristics of Compounds of the Alkaline Earth Metals	309
10.8	Anomalous Behaviour of Beryllium	310
10.9	Some Important Compounds of Calcium	310
10.10	Biological Importance of Magnesium and Calcium	312
Unit 11	The p-Block Elements	315
11.1	Group 13 Elements: The Boron Family	317
11.2	Important Trends and Anomalous Properties of Boron	320
11.3	Some Important Compounds of Boron	320
11.4	Uses of Boron and Aluminium and their Compounds	322
11.5	Group 14 Elements: The Carbon Family	322
11.6	Important Trends and Anomalous Behaviour of Carbon	325
11.7	Allotropes of Carbon	325
11.8	Some Important Compounds of Carbon and Silicon	327

Unit 12	Organic Chemistry – Some Basic Principles and Techniques	334
12.1	General Introduction	334
12.2	Tetravalence of Carbon: Shapes of Organic Compounds	335
12.3	Structural Representations of Organic Compounds	336
12.4	Classification of Organic Compounds	339
12.5	Nomenclature of Organic Compounds	340
12.6	Isomerism	348
12.7	Fundamental Concepts in Organic Reaction Mechanism	349
12.8	Methods of Purification of Organic Compounds	356
12.9	Qualitative Analysis of Organic Compounds	362
12.10	Quantitative Analysis	363
Unit 13	Hydrocarbons	373
13.1	Classification	373
13.2	Alkanes	374
13.3	Alkenes	384
13.4	Alkynes	392
13.5	Aromatic Hydrocarbon	396
13.6	Carcinogenicity and Toxicity	403
Unit 14	Environmental Chemistry	406
14.1	Environmental Pollution	406
14.2	Atmospheric Pollution	407
14.3	Water Pollution	414
14.4	Soil Pollution	416
14.5	Industrial Waste	417
14.6	Strategies to control Environmental Pollution	418
14.7	Green Chemistry	419
	Answers	423
	Index	427

CONTENTS OF CHEMISTRY PART I

UNIT 1	SOME BASIC CONCEPTS OF CHEMISTRY	1
UNIT 2	STRUCTURE OF ATOM	29
UNIT 3	CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES	74
UNIT 4	CHEMICAL BONDING AND MOLECULAR STRUCTURE	100
UNIT 5	STATES OF MATTER	136
UNIT 6	THERMODYNAMICS	160
UNIT 7	EQUILIBRIUM	192
	APPENDICES	239
	ANSWER TO SOME SELECTED QUESTIONS	253
	INDEX	259