

Chemistry

Part II

Textbook for Class XI



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विद्यया ऽ मृतमश्नुते



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NCERT

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OFFICES OF THE PUBLICATION

DIVISION, NCERT

NCERT Campus
Sri Aurobindo Marg
New Delhi 110 016

Phone : 011-26562708

108, 100 Feet Road
Hosdakere Halli Extension
Banashankari III Stage
Bengaluru 560 085

Phone : 080-26725740

Navjivan Trust Building
P.O.Navjivan
Ahmedabad 380 014

Phone : 079-27541446

CWC Campus
Opp. Dhankal Bus Stop
Panihati
Kolkata 700 114

Phone : 033-25530454

CWC Complex
Maligaon
Guwahati 781 021

Phone : 0361-2674869

Publication Team

Head, Publication Division : *M.V. Srinivasan*

Chief Editor : *Bijnan Sutar*

Chief Business Manager : *Amitabh Kumar*

Chief Production Officer (In charge) : *Deepak Jaiswal*

Editor : *Binoy Banerjee*

Production Assistant : *Nalla Aravind*

Cover

Shweta Rao

Illustrations

Nidhi Wadhwa

Anil Nayal

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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RATIONALISATION OF CONTENT IN THE TEXTBOOK

In view of the COVID-19 pandemic, it is imperative to reduce content load on students. The National Education Policy 2020, also emphasises reducing the content load and providing opportunities for experiential learning with creative mindset. In this background, the NCERT has undertaken the exercise to rationalise the textbooks across all classes. Learning Outcomes already developed by the NCERT across classes have been taken into consideration in this exercise.

Contents of the textbooks have been rationalised in view of the following:

- Overlapping with similar content included in other subject areas in the same class
- Similar content included in the lower or higher class in the same subject
- Difficulty level
- Content, which is easily accessible to students without much interventions from teachers and can be learned by children through self-learning or peer-learning
- Content, which is irrelevant in the present context

This present edition, is a reformatted version after carrying out the changes given above.

THE CONSTITUTION OF INDIA

PREAMBLE

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a ¹**[SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC]** and to secure to all its citizens :

JUSTICE, social, economic and political;

LIBERTY of thought, expression, belief, faith and worship;

EQUALITY of status and of opportunity; and to promote among them all

FRATERNITY assuring the dignity of the individual and the ²[unity and integrity of the Nation];

IN OUR CONSTITUENT ASSEMBLY this twenty-sixth day of November, 1949 do **HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION.**

1. Subs. by the Constitution (Forty-second Amendment) Act, 1976, Sec.2, for "Sovereign Democratic Republic" (w.e.f. 3.1.1977)
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TEXTBOOK DEVELOPMENT COMMITTEE

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J.V. Narlikar, *Emeritus Professor*, Chairman, Advisory Committee, Inter University Centre for Astronomy and Astrophysics (IUCCA), Ganeshbhind, Pune University, Pune

CHIEF ADVISOR

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MEMBERS

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I.P. Aggarwal, *Professor*, Regional Institute of Education, NCERT, Bhopal

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M. Chandra, *Professor*, DESM, NCERT, New Delhi

Poonam Sawhney, *PGT (Chemistry)*, Kendriya Vidyalaya, Vikas Puri, New Delhi

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Sunita Malhotra, *Professor*, School of Sciences, IGNOU, Maidan Garhi, New Delhi

V.K. Verma, *Professor (Retd.)* Institute of Technology, Banaras Hindu University, Varanasi

V.P. Gupta, *Reader*, Regional Institute of Education, NCERT, Bhopal

MEMBER-COORDINATOR

Alka Mehrotra, *Reader*, DESM, NCERT, New Delhi

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CONTENTS

	FOREWORD	iii
	RATIONALISATION OF CONTENT IN THE TEXTBOOK	v
Unit 7	Redox Reactions	235
	7.1 Classical Idea of Redox Reactions-Oxidation and Reduction Reactions	235
	7.2 Redox Reactions in Terms of Electron Transfer Reactions	237
	7.3 Oxidation Number	239
	7.4 Redox Reactions and Electrode Processes	249
Unit 8	Organic Chemistry – Some Basic Principles and Techniques	256
	8.1 General Introduction	256
	8.2 Tetravalence of Carbon: Shapes of Organic Compounds	257
	8.3 Structural Representations of Organic Compounds	258
	8.4 Classification of Organic Compounds	261
	8.5 Nomenclature of Organic Compounds	262
	8.6 Isomerism	270
	8.7 Fundamental Concepts in Organic Reaction Mechanism	271
	8.8 Methods of Purification of Organic Compounds	278
	8.9 Qualitative Analysis of Organic Compounds	284
	8.10 Quantitative Analysis	285
Unit 9	Hydrocarbons	295
	9.1 Classification	295
	9.2 Alkanes	296
	9.3 Alkenes	306
	9.4 Alkynes	314
	9.5 Aromatic Hydrocarbon	318
	9.6 Carcinogenicity and Toxicity	325
	Answers	328

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	THERMODYNAMICS	136
UNIT 6	EQUILIBRIUM	168
	APPENDICES	215
	ANSWER TO SOME SELECTED QUESTIONS	229

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