

Chemistry

Part II

Textbook for Class XI



11083

विद्यया ऽ मृतमश्नुते



एन सी ई आर टी
NCERT

राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

11083 – CHEMISTRY PART II

Textbook for Class XI

ISBN 81-7450-494-X (Part I)

ISBN 81-7450-535-0 (Part II)

First Edition

March 2006

Phalgun 1927

Reprinted

October 2006, November 2007,
January 2009, December 2009,
November 2010, January 2012,
November 2012, November 2013,
December 2014, December 2015,
February 2017, February 2018,
December 2018, September 2019,
August 2021 and November 2021

Revised Edition

October 2022 Kartika 1944

Reprinted

March 2024 Chaitra 1946

PD 360T SU

© National Council of Educational
Research and Training, 2006, 2022

₹ 120.00

Printed on 80 GSM paper with NCERT
watermark

Published at the Publication Division
by the Secretary, National Council of
Educational Research and Training,
Sri Aurobindo Marg, New Delhi 110 016
and printed at Hi-Tech Graphics D-4/3,
Basement, Okhla Industrial Area, Phase-II,
New Delhi -110 020

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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
National Council of Educational
Research and Training

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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.

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ACKNOWLEDGEMENTS

The National Council of Educational Research and Training acknowledges the valuable contributions of the individuals and organisations involved in the development of Chemistry textbook for Class XI. It also acknowledges that some useful material from the reprint editions (2005) of Chemistry textbooks has been utilised in the development of the present textbook. The following academics contributed effectively for editing, reviewing, refining and finalisation of the manuscript of this book: G.T. Bhandage, *Professor*, RIE, Mysuru; N. Ram, *Professor*, IIT, New Delhi; R. Sindhu, *Reader*, RIE (NCERT), Bhopal; Sanjeev Kumar, *Reader*, Desh Bandhu College, Kalkaji, New Delhi; Shampa Bhattacharya, *Reader*, Hans Raj College, Delhi; Vijay Sarada, *Reader*, Zakir Husain College, New Delhi. K.K. Arora, *Reader*, Zakir Husain College, New Delhi; Shashi Saxena, *Reader*, Hans Raj College, Delhi; Anuradha Sen, Apeejay School, Sheikh Sarai, New Delhi; C. Shrinivas, *PGT*, Kendriya Vidyalaya, Pushp Vihar, New Delhi; D.L. Bharti, *PGT*, Ramjas School, Sector IV, R.K. Puram, New Delhi; Ila Sharma, *PGT*, Delhi Public School, Dwarka, Sector-B, New Delhi; Raj Lakshmi Karthikeyan, *Head* (Science), Mother's International School, Sri Aurobindo Marg, New Delhi; Sushma Kiran Setia, *Principal*, Sarvodaya Kanya Vidyalaya, Hari Nagar (CT), New Delhi; Nidhi Chaudray, *PGT*, CRPF Public School, Rohini, Delhi; and Veena Suri, *PGT*, Bluebells School, Kailash, New Delhi. We are thankful to them.

We express gratitude to R.S. Sindhu, *Professor* (Retd.), DESM, NCERT, New Delhi, for editing, reviewing and refining the textbook right from the initial stage.

We are also grateful to Ruchi Verma, *Associate Professor*, DESM, NCERT, New Delhi; Pramila Tanwar, *Associate Professor*, DESM, NCERT, New Delhi; R.B. Pareek, *Associate Professor*, RIE, Ajmer and A.K. Arya, *Associate professor*, RIE, Ajmer, for reviewing and refining the content of the textbook.

Special thanks are due to M. Chandra, *Professor and Head*, DESM, NCERT for her support.

The Council also gratefully acknowledges the contribution of Surendra Kumar and Hari Darshan Lodhi *DTP Operator*; Subhash Saluja, Ramendra Kumar Sharma and Abhimanyu Mohanty, *Proof Readers*; Bhavna Saxena, *Copy Editor* and Deepak Kapoor, *Incharge*, Computer Station, in shaping this book. The contributions of the Publication Department in bringing out this book are also duly acknowledged.

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