

Chemistry

Part II

Textbook for Class XI

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

ISBN 81-7450-494-X (Part I)
ISBN 81-7450-535-0 (Part II)

First Edition

March 2006 Phalgun 1927

Reprinted

October 2006 Kartika 1928

November 2007 Kartika 1929

January 2009 Magha 1930

December 2009 Pausa 1931

November 2010 Kartika 1932

January 2012 Pausa 1933

November 2012 Kartika 1934

November 2013 Kartika 1935

December 2014 Pausa 1936

December 2015 Agrahayna 1937

February 2017 Phalgun 1938

February 2018 Phalgun 1939

PD 500T BS

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

₹ 105.00

*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 Aravali Printers &
Publishers (P) Ltd., 50/7, Site-IV Industrial
Area, Sahibabad

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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

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Research and Training

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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 Sarda, *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, *Assistant 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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