

Test Preparation and Competitive Examinations

CATALOGUE
2023-24

 Universities Press





Universities Press

Universities Press focusses on the publication of books in Science, Technology and Medicine.

Several of our books have been co-published for the international market by CRC Press and Springer Verlag. In addition to original publishing, we publish books selectively under license from reputed overseas publishers. Some of our overseas associates include:

- Silicon Press
- American Mathematical Society
- Society for Industrial and Applied Mathematics

Our books are distributed exclusively by **Orient Blackswan Private Limited.**

Registered office

3-6-752, Himayatnagar, Hyderabad 500 029, Telangana, India.

Tel: (040) 2766 2849/2850. Fax: (040) 2764 2115.

Email: centraloffice@orientblackswan.com

Other offices

'Tapovan', 46/47, Rama Rao Layout, Banashankari III Stage, Katriguppe, **Bengaluru** 560 085.

Tel: (080) 2669 0258. Fax: (080) 2669 1907. Email: bangalore@orientblackswan.com

160 Anna Salai, **Chennai** 600 002. Tel: (044) 2852 3346/3358/2231. Email: chennai@orientblackswan.com

Gulmohar House, H.No. 7, Shanti Ram Das Path, Rehabari, A.K. Azad Road, **Guwahati** 781 008,
District Kamrup (M) Assam. Email: guwahati@orientblackswan.com

3-6-752 Himayatnagar, **Hyderabad** 500 029. Tel: (040) 2766 2849/2850. Fax: (040) 2766 2115.

Email: hyderabad@orientblackswan.com

17 Chittaranjan Avenue, **Kolkata** 700 072. Tel: (033) 2212 8052/8054. Fax: (033) 2212 9673.

Email: kolkata@orientblackswan.com

R. Kamani Marg, Indian Mercantile Chambers, Ground Floor, Ballard Estate, **Mumbai** 400 001.

Tel: (022) 2261 6918/19, 2269 5859. Email: mumbai@orientblackswan.com

3/5 Asaf Ali Road, **New Delhi** 110 002. Tel: (011) 2328 4294. Email: delhi@orientblackswan.com

1/24 Asaf Ali Road, **New Delhi** 110 002. Tel: (011) 2323 4957/4958. Fax: (011) 2323 9172.

Email: delhi@orientblackswan.com

Plot No. 2, Block - E, Sector VIII, New Okhla Industrial Development Area (**Noida**), District Gautam
Budh Nagar 201 301, Uttar Pradesh. Tel: (0120) 2424 367. Email: noida@orientblackswan.com

1st Floor, H.No. M/31, Road No. 25, Sri Krishna Nagar, **Patna** 800 001. Tel: (0612) 2522431.

Email: patna@orientblackswan.com

038411



CONTENTS

Test Preparation / Competitive Examinations 1

NEET 1

JEE 5

Foundation Series 7

Olympiads 12

Mathematics 14

Other Examinations 15

Author Index 18

Title Index 18

Register with Us 19

NEET

Objective Biology for NEET, Volume 1

Board of Editors



This book provides all the knowledge, practice and coaching that students need to crack the NEET Biology exam.

Volume 1 deals with the topics covered in Class 11, comprising the living world; biological classification; the plant and animal kingdoms; morphology and anatomy of flowering plants; structural organisation in animals; cell, cell cycle and cell division; biomolecules; transportation, mineral nutrition, photosynthesis, respiration and growth and development in plants; digestion and absorption; breathing and exchange of gases, body fluids and their circulation; excretory products and their elimination; locomotion and movement; neural control and coordination; and chemical control and integration.

Salient features

- Comprehensive compilation of objective questions from previous years' NEET papers
- Exercises comprise multiple choice, true/false, fill in the blank, match the following and diagram-oriented questions
- Indispensable compendium enables students to prepare with efficiency and accuracy
- One-stop knowledge and practice treasure-trove for students that will help them to hone their time management skills and create a unique strategic approach for the exam

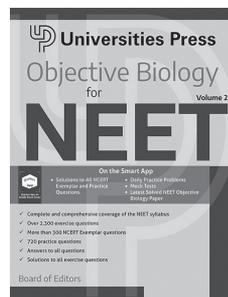
- The Android app accompanying the book contains practice problems, mock tests, solved NEET question papers from 2020 onwards and solutions to NCERT Exemplar and practice questions

Contents: *Preface* ♦ The Living World ♦ Biological Classification ♦ Plant Kingdom ♦ Animal Kingdom ♦ Morphology of Flowering Plants ♦ Anatomy of Flowering Plants ♦ Structural Organisation in Animals ♦ Cell: The Unit of Life ♦ Biomolecules ♦ Cell Cycle and Cell Division ♦ Transport in Plants ♦ Mineral Nutrition ♦ Photosynthesis in Higher Plants ♦ Respiration in Plants ♦ Plant Growth and Development ♦ Digestion and Absorption ♦ Breathing and Exchange of Gases ♦ Body Fluids and their Circulation ♦ Excretory Products and their Elimination ♦ Locomotion and Movement ♦ Neural Control and Coordination ♦ Chemical Control and Integration

2022	452 pp	Paperback
978-93-89211-70-2		₹ 600.00

Objective Biology for NEET, Volume 2

Board of Editors



This book provides all the knowledge, practice and coaching that students need to crack the NEET Biology exam.

Volume 2 deals with the topics covered in Class 12, comprising reproduction in organisms; sexual reproduction in flowering plants; human reproduction; reproductive health; principles of inheritance and variation; molecular basis of inheritance; evolution; human health and diseases; strategies for enhancement in food production;

microbes in human welfare; biotechnology—principles, processes and applications; organism and population; ecosystem; biodiversity and conservation; and environmental issues.

Salient features

- Comprehensive compilation of objective questions from previous years' NEET papers
- Exercises comprise multiple choice, true/false, fill in the blank, match the following and diagram-oriented questions
- Indispensable compendium enables students to prepare with efficiency and accuracy
- One-stop knowledge and practice treasure-trove for students that will help them to hone their time management skills and create a unique strategic approach for the exam
- The Android app accompanying the book contains practice problems, mock tests, solved NEET question papers from 2020 onwards and solutions to NCERT Exemplar and practice questions

Contents: Preface ♦ Reproduction in Organisms ♦ Sexual Reproduction in Flowering Plants ♦ Human Reproduction ♦ Reproductive Health ♦ Principles of Inheritance and Variation ♦ Molecular Basis of Inheritance ♦ Evolution ♦ Human Health and Diseases ♦ Strategies for Enhancement in Food Production ♦ Microbes in Human Welfare ♦ Biotechnology – Principles and Processes ♦ Biotechnology and its Applications ♦ Organism and Population ♦ Ecosystem ♦ Biodiversity and Conservation ♦ Environmental Issues

2022 344 pp Paperback
978-93-89211-71-9 ₹ 375.00

Biology for NEET, Volume 1

NEW

Abhimanyu Kumar Jha

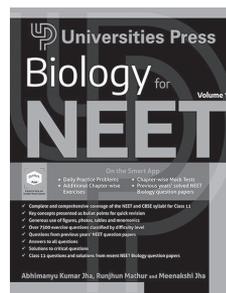
Professor and Head, Department of Biotechnology,
School of Engineering and Technology, Sharda
University, Greater Noida, India

Runjhun Mathur

Research Scholar, Dr. A.P.J. Abdul Kalam Technical
University, Lucknow, India

Meenakshi Jha

Research Scholar, Amity University, Raipur, India



This book aims to prepare medical aspirants for the NEET Biology examination.

Volume 1 explores the topics studied in Class 11. It provides in-depth coverage of the NEET syllabus and uses a target-oriented approach, with greater emphasis on the basics and gradual progression to advanced topics. It works towards maximizing students' knowledge of the subject while also enhancing their problem-solving and time management abilities.

Salient features

- Complete coverage of all topics as per the NEET syllabus
- Content presented as bullet points, making it more reader-friendly
- Over 5250 exercise questions (with answers) categorized based on difficulty level
- Over 2250 questions (with answers) from previous years' NEET papers
- Tips and tricks to help students remember and recall important concepts
- Android app with daily practice problems, additional chapter-wise exercises, mock tests and solved NEET Biology question papers from 2019 onwards

Contents: About the Authors ♦ Preface ♦ Acknowledgements ♦ The Living World ♦ Biological Classification ♦ Plant Kingdom ♦ Animal Kingdom ♦ Morphology of Flowering Plants ♦ Anatomy of Flowering Plants ♦ Structural Organization in Animals ♦ Cell: The Unit of Life ♦ Biomolecules ♦ Cell Cycle and Cell Division ♦ Transport in Plants ♦ Mineral Nutrition ♦ Photosynthesis in Higher Plants ♦ Respiration in Plants ♦ Plant Growth and Development ♦ Digestion and Absorption ♦ Breathing and Exchange of Gases ♦ Body Fluids and Circulation ♦ Excretory Products and their

www.universitiespress.com

Elimination ♦ Locomotion and Movement ♦ Neural Control and Coordination ♦ Chemical Coordination and Integration ♦ *Class 11 Questions and Solutions from Previous Years' NEET Biology Question Papers*

2023 **680 pp** **Paperback**
978-81-95400-93-5 **₹ 1,100.00**

Biology for NEET, Volume 2

© NEW

Abhimanyu Kumar Jha

Professor and Head, Department of Biotechnology,
School of Engineering and Technology, Sharda
University, Greater Noida, India

Runjhun Mathur

Research Scholar, Dr. A.P.J. Abdul Kalam Technical
University, Lucknow, India

Meenakshi Jha

Research Scholar, Amity University, Raipur, India



This book aims to prepare medical aspirants for the NEET Biology examination.

Volume 2 explores the topics studied in Class 12. It provides in-depth coverage of the NEET syllabus and uses a target-oriented approach, with greater emphasis on the basics and gradual progression to advanced topics. It works towards maximizing students' knowledge of the subject while also enhancing their problem-solving and time management abilities.

Salient features

- Complete coverage of all topics as per the NEET syllabus
- Content presented as bullet points, making it more reader-friendly
- Over 3000 exercise questions (with answers) categorized based on difficulty level
- Over 1500 questions (with answers) from previous years' NEET papers

- Tips and tricks to help students remember and recall important concepts
- Android app with daily practice problems, additional chapter-wise exercises, mock tests and solved NEET Biology question papers from 2019 onwards

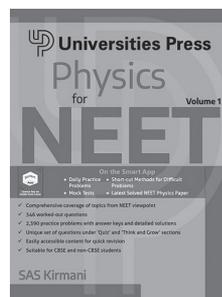
Contents: *About the Authors* ♦ *Preface* ♦ *Acknowledgements* ♦ Reproduction in Organisms ♦ Sexual Reproduction in Flowering Plants ♦ Human Reproduction ♦ Reproductive Health ♦ Principles of Inheritance and Variation ♦ Molecular Basis of Inheritance ♦ Evolution ♦ Human Health and Disease ♦ Strategies for Enhancement in Food Production ♦ Microbes in Human Welfare ♦ Biotechnology – Principles and Practices ♦ Biotechnology and Its Applications ♦ Organisms and Populations ♦ Ecosystem ♦ Biodiversity and Its Conservation ♦ Environmental Issues ♦ *Mock Test I* ♦ *Mock Test II* ♦ *Previous Years' Solved Question Papers*

2023 **468 pp** **Paperback**
978-81-95400-94-2 **₹ 750.00**

Physics for NEET, Volume 1

SAS Kirmani

Founder, Erore Educational Infotech Private Limited,
New Delhi, India



This book conforms to the latest NEET syllabus. Volume 1 of the book covers the NCERT syllabus for Class XI. The questions compiled in the book are in strict accordance with the current trend seen in the CBSE and NEET examinations. The book provides a clear and logical presentation of the basic concepts, principles and their applications. It discusses a broad range of problems with sound physical arguments and problem-solving methodology. Each chapter is supplemented with a set of 'Quick Questions' framed under 'Quiz' and 'Think and Grow' sections to promote logical

thinking and a spirit of inquiry among the students. The book also has app-based content that includes daily practice problems and mock tests for quick revision.

Contents: Units and Dimensions ♦ Kinematics ♦ Laws of Motion ♦ Work, Energy, Power ♦ Motion of System of Particles and Rigid Body ♦ Gravitation ♦ Properties of Bulk Matter ♦ Thermodynamics ♦ Behaviour of Perfect Gas and Kinetic Theory ♦ Oscillations and Waves

2022 **784 pp** **Paperback**
978-93-89211-67-2 **₹ 795.00**

Physics for NEET, Volume 2

SAS Kirmani

Founder, Erore Educational Infotech Private Limited, New Delhi, India



This book conforms to the latest NEET syllabus. Volume 2 of the book covers the NCERT syllabus for Class XII. The questions compiled in the book are in strict accordance with the current trend seen in the CBSE and NEET examinations. The book provides a clear and logical presentation of the basic concepts, principles and their applications. It discusses a broad range of problems with sound physical arguments and problem-solving methodology. Each chapter is supplemented with a set of 'Quick Questions' framed under 'Quiz' and 'Think and Grow' sections to promote logical thinking and a spirit of inquiry among the students. The book also has app-based content that includes daily practice problems and mock tests for quick revision.

Contents: Electrostatics ♦ Current Electricity ♦ Magnetic Effects of Current and Magnetism ♦ Electromagnetic Induction and Alternating Current ♦ Electromagnetic Waves ♦ Optics ♦ Dual Nature

of Matter and Radiation ♦ Atoms and Nuclei ♦ Electronic Devices

2022 **624 pp** **Paperback**
978-93-89211-68-9 **₹ 625.00**

Chemistry for NEET, Volume 1 **FORTHCOMING**

M P Sidana

Director, Wisdom Classes by Sidana, and President, Sidana Group of Institutes and Sidana Multispeciality Hospital, Amritsar, India

This book is a comprehensive resource for students of Class XI preparing for NEET and other medical entrance examinations. Every chapter starts with clear explanations for all the required topics. This is followed by Multiple Choice Questions segregated topic-wise with an increasing level of difficulty under each topic. Match the Following and Assertion-Reason questions are provided for each chapter. In addition, NCERT questions are solved in all the relevant chapters.

Contents: Basic concepts of chemistry ♦ Structure of the atom ♦ Classification of elements and periodicity of properties ♦ Chemical bonding ♦ States of matter ♦ Thermodynamics ♦ Chemical equilibrium ♦ Ionic equilibrium ♦ Redox reactions ♦ Hydrogen and its compounds ♦ *s*-Block elements ♦ *p*-Block elements ♦ Organic chemistry ♦ Hydrocarbons

Chemistry for NEET, Volume 2 **FORTHCOMING**

M P Sidana

Director, Wisdom Classes by Sidana, and President, Sidana Group of Institutes and Sidana Multispeciality Hospital, Amritsar, India

This book is a comprehensive resource for students of Class XII preparing for NEET and other medical entrance examinations. Every chapter starts with clear explanations for all the required topics. This is followed by Multiple Choice Questions segregated topic-wise with an increasing level of difficulty under each topic. Match the Following and Assertion-Reason questions are provided for each chapter. In addition, NCERT questions are solved in all the relevant chapters.

Contents: Solid state ♦ Solutions ♦ Electrochemistry ♦ Chemical kinetics ♦ Surface chemistry ♦ General

www.universitiespress.com

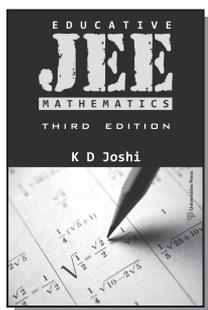
principles and processes of isolation of elements
 ♦ *p*-Block elements ♦ *d*- and *f*-block elements
 ♦ Coordination compounds ♦ Haloalkanes and haloarenes ♦ Alcohols, phenols and ethers ♦ Aldehydes, ketones and carboxylic acids ♦ Organic compounds containing nitrogen ♦ Biomolecules ♦ Principles related to practical chemistry

JEE

Educative JEE (Third Edition)

K D Joshi

Adjunct Faculty, Department of Mathematics,
 College of Engineering, Pune, India



The Joint Entrance Examination (JEE), the gateway to the IITs—India's prestigious institutes of learning—is considered as one of the toughest examinations conducted in India. Inevitably, there is competition to succeed in it. While such a competition is not bad in itself, the undesirable consequence is that in the mad rush to solve problems, the educative value of a problem is often lost. The thought process of students is thus skewed into solving problems (mostly by analogy) without thoroughly understanding the basic concepts underlying the problems and without a corresponding development of the thinking ability. Consequently, they are often unable to offer logical negation of a statement, even though they are intellectually capable of it.

This book is an attempt to lay before students both the concepts as well as the process of solving problems at the JEE. The problems have been collected mostly from JEE papers ranging over a period of two decades. The thrust is not so much on solving the problems as in the assimilation of the theory behind them and learning a few related new concepts. The solutions then come as natural

corollaries. The book also contains some helpful tips aimed at sharpening the thinking ability and increasing the mathematical maturity of the student. New problems and an occasional new solution to an existing problem were added in the second edition. In this edition, two appendices, one on matrices and the other on solid coordinate geometry, have been added in view of the changes in JEE syllabus. Further, all the errors in the earlier two editions, listed as errata in the author's blog, have been corrected, and occasionally, a new solution to an existing problem has been included.

Contents: *Preface to the Third Edition* ♦ *Preface to the First Edition* ♦ *Disclaimer about JEE* ♦ **Part-I Precalculus Mathematics: Counting Problems** ♦ Basic Algebra ♦ Theory Of Equations ♦ Number Theory ♦ Binomial Identities ♦ Inequalities ♦ Trigonometric Identities ♦ Geometry ♦ Coordinate Geometry ♦ Trigonometric Equations ♦ Solution Of Triangles ♦ Heights And Distances ♦ *Answers to exercises in Part - I* ♦ **Part-II Calculus, Vectors, Probability, Review: Maxima, Minima And Concavity** ♦ Trigonometric Optimisation ♦ Limits, Continuity and Derivatives ♦ Theoretical Calculus ♦ Areas and Antiderivatives ♦ Definite Integrals ♦ Differential Equations ♦ Functional Equations and Relations ♦ Vectors ♦ Finitistic Probability ♦ Infinitistic Probability ♦ Miscellaneous Tips and Review ♦ *Answers to exercises in Part - II* ♦ *Appendix 1: More on matrices* ♦ *Appendix 2: Solid coordinate geometry* ♦ *Index*

2015

1100 pp

Paperback

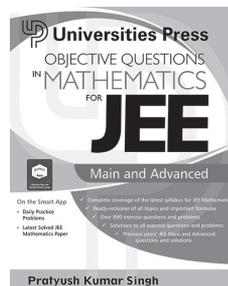
978-81-7371-945-5

₹ 1,595.00

Objective Questions in Mathematics for JEE Main and Advanced

Pratyush Kumar Singh

Founder of an IIT coaching centre in Ranchi, India



This book has been designed to provide students with intensive as well as extensive practice of the questions and problems they will encounter in the JEE Mathematics exams. The aim of this book is to improve and enhance the aptitude, proficiency and problem-solving ability of students in Mathematics to enable them to crown their endeavours with success.

Salient features

- Key concepts at the beginning of every chapter to summarise the important principles
- Key equations and formulas presented for every topic
- Detailed, step-by-step solutions to all questions and problems
- Lavish use of figures to illustrate concepts and problems
- Appendices with previous years' JEE Main and Advanced solved questions
- Android app with practice problems and solutions to the latest JEE Mathematics paper
- Video lectures available at www.universitiespress.com/jee maths

Contents: Preface ♦ Acknowledgements ♦ **PART I: ALGEBRA** ♦ Theory of Equations ♦ Quadratic Equations ♦ Sequences and Series ♦ Binomial Theorem ♦ Complex Numbers ♦ Permutations and Combinations ♦ Probability ♦ Matrices ♦ Vector Algebra ♦ **PART II: CALCULUS** ♦ Algebraic Functions ♦ Trigonometric Functions ♦ Trigonometric Equations ♦ Solution of Triangles ♦ Inverse Trigonometric Functions ♦ Exponential and Log Functions ♦ Limits and Continuity ♦ Investigating Functions ♦ Differentiation ♦ Application of Derivatives ♦ Indefinite Integration ♦ Definite Integration ♦ Differentiation of an Integral ♦ Area Between Curves ♦ Sum of a Series and Definite Integral ♦ Differential Equations ♦ **PART III: COORDINATE GEOMETRY** ♦ Straight Line ♦ Circle ♦ Parabola ♦ Ellipse ♦ Hyperbola ♦ 3D Geometry ♦ Appendix

2022

452 pp

Paperback

978-938-9211-87-0

₹ 475.00

Objective Questions in Physics for JEE Main and Advanced

Pratyush Kumar Singh

Founder of an IIT coaching centre in Ranchi, India



This book has been designed to provide students with intensive as well as extensive practice of the questions and problems they will encounter in the JEE Physics exams. The aim of this book is to improve and enhance the aptitude, proficiency and problem-solving ability of students in Physics to enable them to crown their endeavours with success.

Salient features

- Key concepts at the beginning of every chapter to summarise the important principles
- Key equations and formulas presented for every topic
- Detailed, step-by-step solutions to all questions and problems
- Lavish use of figures to illustrate concepts and problems
- Appendices with previous years' JEE Main and Advanced solved questions
- Android app with practice problems and solutions to the latest JEE Physics paper
- Video lectures available at www.universitiespress.com/jee physics

Contents: Preface ♦ Acknowledgements ♦ **PART I: MECHANICS** ♦ Physical Quantities and Measurement ♦ Kinematics ♦ Force and Motion ♦ Work–Energy ♦ Linear Momentum and Collision ♦ Torque and Angular Momentum ♦ Elasticity ♦ Fluid Mechanics ♦ Surface Tension and Viscosity ♦ Gravitation ♦ Simple Harmonic Motion ♦ Mechanical Waves ♦ **PART II: THERMODYNAMICS** ♦ Calorimetry, Thermal Expansion and Heat Transfer

♦ Gas Laws and First Law of Thermodynamics ♦
PART III: ELECTRICITY AND MAGNETISM ♦
 Electrostatic Field and Potential ♦ Current Electricity ♦
 Capacitors ♦ Magnetism ♦ Electromagnetic Induction
 ♦ AC Circuits and EM Waves ♦ **PART IV: OPTICS
 AND MODERN PHYSICS** ♦ Geometrical Optics ♦
 Atomic Physics ♦ Nuclear Physics ♦ Wave Optics ♦
*Appendix I: Previous Years' JEE Main Questions and
 Solutions* ♦ *Appendix II: Previous Years' JEE Advanced
 Questions and Solutions*

2022 **440 pp** **Paperback**
978-93-89211-85-6 **₹ 475.00**

Physics for JEE, Volume 1

• FORTHCOMING

Sheikh Ashfaque Ali

Deputy Registrar, Aliah University, Kolkata, India

This book conforms to the syllabus for the JEE Main examination. The questions compiled in the book are in strict accordance with the current trend seen in the CBSE and Joint Entrance Examinations conducted by IIT. The book provides a clear and logical presentation of the basic concepts, principles and their applications. It discusses a broad range of problems with sound physical arguments and problem-solving methodology.

The book addresses the most common misconceptions that may arise in students' minds as they study each topic and provides several shortcut methods to remember the problem-solving strategies effortlessly. The discussions of each chapter have been reinforced with solved examples and MCQs thoughtfully grouped according to their level of difficulty to help students gain confidence as they prepare to take up the test.

Contents: Unit, Dimension and Measurement ♦ Vectors ♦ Motion in a Straight Line ♦ Two-dimensional Motion ♦ Newton's Laws of Motion ♦ Friction ♦ Rotational Motion ♦ Centre of Mass and Equilibrium of a Body ♦ Work, Power and Energy ♦ Gravitation ♦ Elasticity ♦ Surface Tension ♦ Hydrodynamics ♦ Hydrostatics ♦ Thermal Properties of Matter – I: Thermometry, Thermal Expansion and Calorimetry ♦ Thermal Properties of Matter – II: Transmission of Heat ♦ Kinetic Theory of Gases ♦ Thermodynamics ♦ Simple Harmonic Motion ♦ Waves

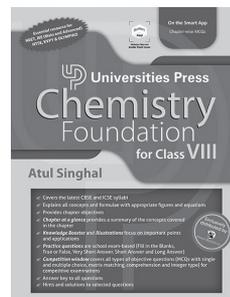
FOUNDATION SERIES

Chemistry Foundation for Class VIII

NEW

Atul Singhal

Academic Head, Aakash Institute, Modipuram,
Meerut, India



This book is a comprehensive resource for students of Class VIII preparing for the CBSE and ICSE Board examinations. It provides clear and concise explanations and covers all topics in these syllabi, along with a variety of problems drawn from the current and previous years' question papers. Solutions are provided to every single problem along with hints to crack the tough ones. The book provides a strong foundation which the increasing competition mandates.

Salient features

- The entire curriculum is covered in a lucid manner accompanied by illustrations, equations and formulae.
- It covers the CBSE and ICSE syllabi and lays the foundation for preparation for competitive examinations.
- Solutions to all problems have been provided (there is no unsolved exercise).
- The exercises are divided into Practice questions (school exam-based) and Competition window (competitive exam-based).
- Various types of questions are included—very short, short and long.
- Topic-wise and level-wise MCQs in each chapter (first of its kind).
- Related advanced level concepts highlighted in boxes (Knowledge booster).
- Segment-wise questions and solutions for school exams in each chapter.

- Provides a strong foundation for students of different state boards.
- The book is accompanied by the Orient BlackSwan Smart App that provides chapter-wise NEET–JEE type MCQs with solutions.

Contents: Preface ♦ Acknowledgements ♦ Matter ♦ Elements, Compounds and Mixtures ♦ The Language of Chemistry ♦ Chemical Reactions ♦ Atomic Structure ♦ Hydrogen ♦ Water ♦ Carbon and its Compounds ♦ Synthetic Fibres and Plastics ♦ Materials: Metals and Nonmetals ♦ Coal and Petroleum ♦ Combustion and Flame ♦ Pollution of Air and Water ♦ Appendices

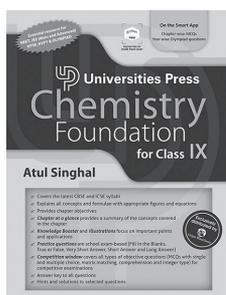
2023 **288 pp** **Paperback**
978-93-93330-32-1 **₹ 450.00**

Chemistry Foundation for Class IX

NEW

Atul Singhal

Academic Head, Aakash Institute, Modipuram,
Meerut, India



This book is a comprehensive resource for students of Class IX preparing for the CBSE and ICSE Board examinations. It provides clear and concise explanations and covers all topics in these syllabi, along with a variety of problems drawn from the current and previous years' question papers. Solutions are provided to every single problem along with hints to crack the tough ones. The book provides a strong foundation which the increasing competition mandates.

Salient features

- The entire curriculum is covered in a lucid manner accompanied by illustrations, equations and formulae.
- It covers the CBSE and ICSE syllabi and lays the foundation for preparation for competitive examinations.

- Solutions to all problems have been provided (there is no unsolved exercise).
- The exercises are divided into Practice questions (school exam-based) and Competition window (competitive exam-based).
- Various types of questions are included—very short, short and long.
- Topic-wise and level-wise MCQs in each chapter (first of its kind).
- Related advanced level concepts highlighted in boxes (Knowledge booster).
- Segment-wise questions and solutions for school exams in each chapter.
- Provides a strong foundation for students of different state boards.
- The book is accompanied by the Orient BlackSwan Smart App that provides chapter-wise NEET–JEE type MCQs and Year-wise Olympiad Question Papers with solutions.

Contents: Preface ♦ Acknowledgements ♦ Matter in Our Surroundings ♦ Is Matter Around Us Pure? ♦ Atoms and Molecules ♦ Chemical Reactions and Equations ♦ Atomic Structure ♦ The Periodic Table ♦ Chemical Bonding ♦ Gaseous State ♦ Water ♦ Hydrogen ♦ Atmospheric Pollution

2023 **280 pp** **Paperback**
978-93-93330-30-7 **₹ 450.00**

Chemistry Foundation for Class X

NEW

Atul Singhal

Academic Head, Aakash Institute, Modipuram,
Meerut, India



This book is a comprehensive resource for students of Class X preparing for the CBSE and ICSE Board examinations. It provides clear and concise explanations and covers all topics in these syllabi,

along with a variety of problems drawn from the current and previous years' question papers. Solutions are provided to every single problem along with hints to crack the tough ones. The book provides a strong foundation which the increasing competition mandates.

Salient features

- The entire curriculum is covered in a lucid manner accompanied by illustrations, equations and formulae.
- It covers the CBSE and ICSE syllabi and lays the foundation for preparation for competitive examinations.
- Solutions to all problems have been provided (there is no unsolved exercise).
- The exercises are divided into Practice questions (school exam-based) and Competition window (competitive exam-based).
- Various types of questions are included—very short, short and long.
- Topic-wise and level-wise MCQs in each chapter (first of its kind).
- Related advanced level concepts highlighted in boxes (Knowledge booster).
- Segment-wise questions and solutions for school exams in each chapter.
- Provides a strong foundation for students of different state boards.
- The book is accompanied by the Orient BlackSwan Smart App that provides chapter-wise NEET–JEE type MCQs, year-wise KVPY papers and year-wise NTSE papers with solutions.

Contents: *Preface* ♦ *Acknowledgements* ♦ Chemical Reactions and Equations ♦ Mole Concept, Stoichiometry and Behaviour of Gases ♦ Atomic Structure ♦ Periodic Table and Periodic Properties ♦ Chemical Bonding ♦ Acids, Bases and Salts ♦ Electrolysis and Electrochemistry ♦ Metals and Non-metals ♦ Carbon and its Compounds ♦ Organic Chemistry ♦ Chemical Kinetics and Chemical Equilibrium ♦ Study of Compounds ♦ *Appendices*

2023
978-93-93330-25-3

436 pp

Paperback
₹ 650.00

Biology Foundation for Class VIII

NEW

Abhimanyu Kumar Jha

Professor and Head of the Department of Biotechnology, School of Engineering and Technology (SET), Sharda University, Greater Noida, India

Abhinav Datta

Biology Teacher, Shiv Nadar School, Noida, India

Mahek Sharan

Research Scholar in Zoology, Banaras Hindu University, Varanasi, India



This book is an excellent preparation resource in Biology for students of Class VIII appearing for the CBSE and ICSE examinations. It provides clear and concise explanations and covers all the topics in these syllabi, along with a variety of exercise questions drawn from the current and previous years' question papers. Answers or hints are provided for every single question.

This book provides a strong foundation that students can build on to realise their academic aspirations.

Salient features

- Covers the CBSE and ICSE syllabi and serves as a base for competitive examination preparation
- Presents clearly defined objectives at the beginning of every chapter
- Explains all topics and concepts in a concise manner, with lavish use of illustrations
- Provides a summary at the end of every chapter for quick reference
- Demarcates exercises as Practice Questions (school exam-based) and Competition Window (competitive exam-based)
- Includes 1,385 school exam-based and competitive exam-based questions
- Android app offers additional chapter-wise MCQs

Contents: *About the Authors* ♦ *Preface* ♦ *Acknowledgements* ♦ Cells: Structure and Functions ♦ Adolescence ♦ Reproduction in Animals ♦ The Circulatory System ♦ Neural and Endocrine Systems ♦ Microorganisms: Friends or Foes? ♦ Health, Hygiene and First Aid ♦ Transportation and Reproduction in Plants ♦ Crop Production and Management ♦ Ecosystem and Biodiversity ♦ Conservation of Plants and Animals

2023 **240 pp** **Paperback**
978-93-93330-55-0 **₹ 425.00**

Biology Foundation for Class IX

© NEW

Abhimanyu Kumar Jha

Professor and Head of the Department of Biotechnology, School of Engineering and Technology (SET), Sharda University, Greater Noida, India

Archana Awasthi

Biology Teacher, Delhi Public School, Ghaziabad, India

Mahek Sharan

Research Scholar in Zoology, Banaras Hindu University, Varanasi, India



This book is an excellent preparation resource in Biology for students of Class IX appearing for the CBSE and ICSE examinations. It provides clear and concise explanations and covers all the topics in these syllabi, along with a variety of exercise questions drawn from the current and previous years' question papers. Answers or hints are provided for every single question.

This book provides a strong foundation that students can build on to realise their academic aspirations.

Salient features

- Covers the CBSE and ICSE syllabi and serves as a base for competitive examination preparation
- Presents clearly defined objectives at the beginning of every chapter

- Explains all topics and concepts in a concise manner, with lavish use of illustrations
- Provides a summary at the end of every chapter for quick reference
- Demarcates exercises as Practice Questions (school exam-based) and Competition Window (competitive exam-based)
- Includes 1,900 school exam-based and competitive exam-based questions
- Android app offers additional chapter-wise MCQs

Contents: *About the Authors* ♦ *Preface* ♦ *Acknowledgements* ♦ Introduction to Biology ♦ Cells: The Fundamental Units of Life ♦ Tissues ♦ Diversity in Living Organisms ♦ Flowers and Pollination ♦ Seeds, Germination and Fertilisation ♦ Natural Resources ♦ Improvements in Food Resources ♦ Skin and Locomotion ♦ Nutrition and Digestion ♦ Respiration in Plants and Animals ♦ Economic Importance of Bacteria and Fungi ♦ Why Do We Fall Ill? ♦ Waste Generation and Management

2023 **300 pp** **Paperback**
978-93-93330-56-7 **₹ 525.00**

Biology Foundation for Class X

© NEW

Abhimanyu Kumar Jha

Professor and Head of the Department of Biotechnology, School of Engineering and Technology (SET), Sharda University, Greater Noida, India

Balasubramanian Velramar

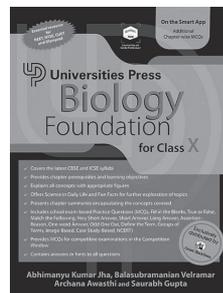
Assistant Professor, Amity Institute of Biotechnology, Amity University Chhattisgarh, Raipur, India

Archana Awasthi

Biology Teacher, Delhi Public School, Ghaziabad, India

Saurabh Gupta

Research Scholar, Amity University Chhattisgarh, Raipur, India



This is a well-made resource book in Physics for both CBSE and ICSE students, providing clear and logical explanation of the concepts backed by sound physical arguments. The book elaborates on practical applications of the theory covered in each chapter and is replete with a wide array of exercise questions that help students to understand the subject and ace the board exams effortlessly. The solutions to the problems are provided step by step with detailed explanations wherever necessary.

Contents: Motion ♦ Force and Laws of Motion ♦ Work, Power and Energy ♦ Gravitation ♦ Sound ♦ Electricity and Magnetism ♦ Fluids

2024 244 pp Paperback
978-93-93330-51-2 ₹ 465.00

Physics Foundation for Class X

NEW

SAS Kirmani

Founder, Erode Educational Infotech Private Limited,
New Delhi, India



This is a well-made resource book in Physics for both CBSE and ICSE students, providing clear and logical explanation of the concepts backed by sound physical arguments. The book elaborates on practical applications of the theory covered in each chapter and is replete with a wide array of exercise questions that help students to understand the subject and ace the board exams effortlessly. The solutions to the problems are provided step by step with detailed explanations wherever necessary.

Contents: Electricity ♦ Magnetic and Heating Effects of Current ♦ Reflection of Light ♦ Refraction of Light ♦ Human Eye ♦ Heat ♦ Modern Physics

2024 256 pp Paperback
978-93-93330-53-6 ₹ 495.00

OLYMPIADS

Mathematical Olympiad Challenges (Second Edition)

Titu Andreescu

American Mathematics Competitions, University of
Nebraska, Lincoln, USA

Răzvan Gelca

Texas Tech. University, Department of Mathematics
and Statistics, Lubbock, USA

This is a rich collection of problems put together by two experienced and well-known professors of the US International Mathematical Olympiad Team. Hundreds of beautiful, challenging and instructive problems from algebra, geometry, trigonometry, combinatorics and number theory are clustered by topic into self-contained sections with solutions provided separately. All sections start with an essay discussing basic facts and one or two representative examples. A list of carefully chosen problems follows. Additionally, historical insights and asides are presented to stimulate further inquiry. The emphasis throughout is on encouraging readers to move away from routine exercises and memorised algorithms toward creative solutions to open-ended problems.

2014 304 pp Paperback
978-87-3221-485-4 ₹ 925.00

Mathematical Techniques for Competitive Examinations

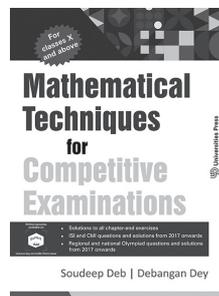
NEW

Soudeep Deb

Assistant Professor, Indian Institute of Management
Bangalore, Bengaluru, India

Debangana Dey

Visiting Fellow, National Institute of Mental Health,
Bethesda, Maryland, USA



This is a problem-based book aimed at high-school students interested in mathematical topics related to the ISI and CMI entrance tests as well as Mathematics Olympiads. This book will help students in designing a well-planned pathway to tackle complicated problems from topics such as number theory, combinatorics, algebra, calculus, Euclidean and coordinate geometry, probability and statistics. The problem-solving strategies and pointers described here will help students become confident in mathematics and pave the way to attaining success.

Salient features

- For students appearing for the ISI and CMI entrance exams as well as Mathematics Olympiads
- Key results at the beginning of every chapter, listing the important definitions, theorems, identities, algorithms, principles, functions and formulae
- Solved examples showcasing different applications of the key results
- Useful tips in the form of tricks and techniques that can be used to solve problems
- Chapter-end exercises comprising multiple choice questions with solutions and subjective questions with hints
- Solved questions from the 2019, 2020 and 2021 ISI B.Math, ISI B.Stat and CMI BSc Math question papers
- Android app with solutions to all chapter-end exercises, questions and solutions from ISI and CMI question papers from 2017 onwards, and questions and solutions from regional and national Olympiads from 2017 onwards

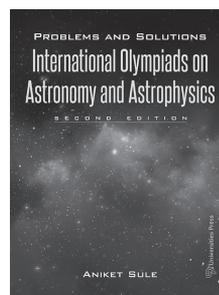
Contents: *Preface* ♦ *Acknowledgements* ♦ Number Theory ♦ Combinatorics ♦ Algebra ♦ Calculus ♦ Euclidean Geometry ♦ Coordinate Geometry ♦ Probability and Statistics ♦ Miscellaneous ♦ *Appendix: Previous Years' Subjective Questions and Solutions*

2023 **360 pp** **Paperback**
978-93-93330-10-9 **₹ 625.00**

Problems and Solutions: International Olympiads on Astronomy and Astrophysics

Aniket Sule

Academic Coordinator, Indian Astronomy Olympiad Programme; Regional Coordinator (Asia-Pacific), IOAA and Reader, Homi Bhabha Centre for Science Education, Tata Institute of Fundamental Research, Mumbai, India



The International Olympiads on Astronomy and Astrophysics (IOAA) are competitions where teams of high-school students from around the world compete in a series of tests and are awarded medals based on their performance. Started in 2007, more than 45 countries have participated in these olympiads. The competition comprises three rounds: theoretical problems, data analysis problems and night sky observation tests. This book presents problems from all the eight IOAAs held thus far. The problems are categorised according to the concepts involved and also graded according to the difficulty level. Solutions to all the problems are provided. Additional notes help make the solutions self-explanatory.

Contents: *Preface* ♦ *Acknowledgments* ♦ *Academic Committees of Previous IOAAs* ♦ *President's Message* ♦ *A Note about the Problems* ♦ *Table of Constants* ♦ *Celestial Mechanics* ♦ *Celestial Coordinate Systems* ♦ *Geometric Astronomy and Time* ♦ *Optics and Detectors* ♦ *Physics of Stars and Planets* ♦ *Stellar Observations* ♦ *Binaries and Variables* ♦ *Galactic Astrophysics* ♦ *Extragalactic Astrophysics* ♦ *Night Sky Observation* ♦ *Solutions* ♦ *Appendix: Syllabus of IOAA*

2015 **304 pp** **Paperback**
978-81-7371-980-6 **₹ 975.00**

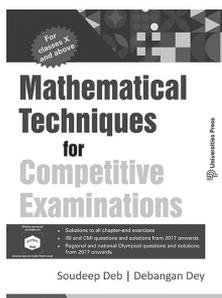
MATHEMATICS

**Mathematical Techniques for
Competitive Examinations**

Soudeep Deb

 Assistant Professor, Indian Institute of Management
Bangalore, Bengaluru, India

Debangana Dey

 Visiting Fellow, National Institute of Mental Health,
Bethesda, Maryland, USA


This is a problem-based book aimed at high-school students interested in mathematical topics related to the ISI and CMI entrance tests as well as Mathematics Olympiads. This book will help students in designing a well-planned pathway to tackle complicated problems from topics such as number theory, combinatorics, algebra, calculus, Euclidean and coordinate geometry, probability and statistics. The problem-solving strategies and pointers described here will help students become confident in mathematics and pave the way to attaining success.

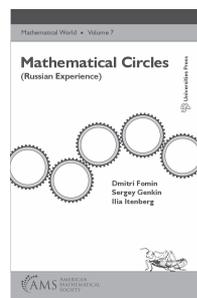
Salient features

- For students appearing for the ISI and CMI entrance exams as well as Mathematics Olympiads
- Key results at the beginning of every chapter, listing the important definitions, theorems, identities, algorithms, principles, functions and formulae
- Solved examples showcasing different applications of the key results
- Useful tips in the form of tricks and techniques that can be used to solve problems
- Chapter-end exercises comprising multiple choice questions with solutions and subjective questions with hints

- Solved questions from the 2019, 2020 and 2021 ISI B.Math, ISI B.Stat and CMI BSc Math question papers
- Android app with solutions to all chapter-end exercises, questions and solutions from ISI and CMI question papers from 2017 onwards, and questions and solutions from regional and national Olympiads from 2017 onwards

Contents: Preface ♦ Acknowledgements ♦ Number Theory ♦ Combinatorics ♦ Algebra ♦ Calculus ♦ Euclidean Geometry ♦ Coordinate Geometry ♦ Probability and Statistics ♦ Miscellaneous ♦ Appendix: Previous Years' Subjective Questions and Solutions

2023	360 pp	Paperback
978-93-93330-10-9		₹ 625.00

Mathematical Circles (Russian Experience)
Dmitri Fomin, Sergey Genkin and Ilya Itenberg


It is a book produced by a remarkable cultural circumstance in the former Soviet Union which fostered the creation of groups of students, teachers, and mathematicians called “Mathematical Circles”. The work is predicated on the idea that studying mathematics can generate the same enthusiasm as playing a team sport—without necessarily being competitive. This book is intended for both students and teachers who love mathematics and want to study its various branches beyond the limits of the school curriculum. It is also a book of mathematical recreations and, at the same time, a book containing vast theoretical and problem material in main areas of what authors consider to be “extracurricular mathematics”.

1998	288 pp	Paperback
978-81-7371-115-2		₹ 745.00

www.universitiespress.com

Mathematical Olympiad Challenges (Second Edition)

Titu Andreescu

American Mathematics Competitions, University of
Nebraska, Lincoln, USA

Răzvan Gelca

Texas Tech. University, Department of Mathematics
and Statistics, Lubbock, USA

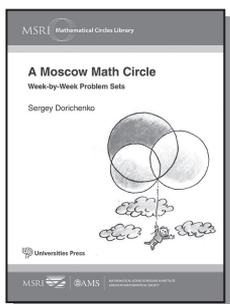
This is a rich collection of problems put together by two experienced and well-known professors of the US International Mathematical Olympiad Team. Hundreds of beautiful, challenging and instructive problems from algebra, geometry, trigonometry, combinatorics and number theory are clustered by topic into self-contained sections with solutions provided separately. All sections start with an essay discussing basic facts and one or two representative examples. A list of carefully chosen problems follows. Additionally, historical insights and asides are presented to stimulate further inquiry. The emphasis throughout is on encouraging readers to move away from routine exercises and memorised algorithms toward creative solutions to open-ended problems.

2014 **304 pp** **Paperback**
978-87-3221-485-4 **₹ 925.00**

Moscow Math Circle, A: Week-by-Week Problem Sets

Sergey Dorichenko

Moscow Schools 57 and 179, Moscow, Russia



Moscow has a rich tradition of successful math circles, to the extent that many other circles are modeled on them. This book presents materials used during the course of one year in a math circle organized by mathematics faculty at Moscow

State University, and also used at the mathematics magnet school known as Moscow School Number 57.

Each problem set has a new topic, offering problems in a range of difficulty levels. This time-tested pattern has proved its effectiveness in engaging all students and helping them master new material while building on earlier knowledge.

The introduction describes in detail how the math circles at Moscow State University are run. Dorichenko describes how the early sessions differ from later sessions, how to choose problems, and what sort of difficulties may arise when running a circle. The book also includes a selection of problems used in the competition known as the Mathematical Maze, a mathematical Circle, which is run in the Russian style.

2016 **264 pp** **Paperback**
978-81-7371-993-6 **₹ 675.00**

OTHER EXAMINATIONS

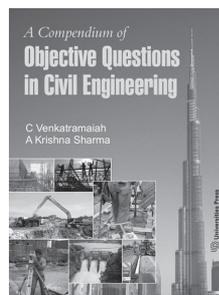
Compendium of Objective Questions in Civil Engineering, A

C Venkatramaiah

Formerly Professor of Civil Engineering, S V University
College of Engineering, Tirupati, India

A Krishna Sharma

Principal, Brindavan College of Engineering,
Bengaluru, India



This book has been designed to meet the needs of students preparing for all kinds of competitive examinations and entrance tests for admission to postgraduate courses and job recruitment. About 4000 objective-type questions of different kinds, especially the multiple choice variety, from the

www.universitiespress.com

incorporation of different types of multiple choice questions will aid the student to comprehend the subtle aspects of each topic.

Salient features

- Covers all the main topics of physical chemistry at the undergraduate and post-graduate levels
- Includes essential theoretical aspects required for problem solving
- Provides 544 worked out problems, 351 practice problems with solutions, 508 multiple choice questions with answers
- Covers the CBCS UGC syllabus; authored by eminent professors from IIT
- Aids preparation for competitive examinations such as CSIR–UGC NET, GATE and JAM
- Includes solved question papers of CSIR–UGC NET, GATE and JAM

- Provides access to an App for revision on your Android mobile phone.

Contents: *Preface* ♦ *Fundamental Constants* ♦ Gaseous State ♦ Thermodynamics ♦ Electrochemistry ♦ Chemical Kinetics ♦ Liquid State ♦ Surface Chemistry, Catalysis and Colloids ♦ Solid State ♦ Photochemistry ♦ Solutions ♦ Phase Rule and Phase Equilibrium ♦ Polymer Chemistry ♦ Quantum Chemistry ♦ Acid–Base and Other Ionic Equilibria, Buffers and Buffer Action, Indicators ♦ Nuclear Chemistry ♦ Applications of Statistical Thermodynamics ♦ *Miscellaneous Problems* ♦ *Bibliography* ♦ *Appendix 1: CSIR–UGC NET JRF/SET Solved Question Paper* ♦ *Appendix 2: GATE Solved Question Paper* ♦ *Appendix 3: JAM Solved Question Paper* ♦ *Index*

2020

978–93–89211–18–4

424 pp

Paperback

₹ 850.00

AUTHOR INDEX

- | | | | |
|----------------------|-------------|---------------------------|--------------|
| Ali, Sheikh Ashfaque | 7 | Joshi, K D | 5 |
| Andreescu, Titu | 12, 15 | Kalidas, C | 16 |
| Awasthi, Archana | 10 | Kirmani, SAS | 3, 4, 11, 12 |
| Datta, Abhinav | 9 | Mathur, Runjhun | 2, 3 |
| Deb, Soudeep | 12, 14 | Sangaranarayanan, M V | 16 |
| Dey, Debangana | 12, 14 | Sharan, Mahek | 9, 10 |
| Dorichenko, Sergey | 15 | Sharma, A Krishna | 15 |
| Fomin, Dmitri | 14 | Sidana, M P | 4 |
| Gelca, Răzvan | 12, 15 | Singh, Pratyush Kumar | 5, 6 |
| Genkin, Sergey | 14 | Singhal, Atul | 7, 8 |
| Gupta, Saurabh | 10 | Sule, Aniket | 13 |
| Itenberg, Iliia | 14 | Thareja, Reema | 16 |
| Jha, Abhimanyu Kumar | 2, 3, 9, 10 | Velramar, Balasubramanian | 10 |
| Jha, Meenakshi | 2, 3 | Venkatramaiah, C | 15 |

TITLE INDEX

- | | | | |
|---|--------|---|----|
| Biology for NEET, Volume 1 | 2 | Moscow Math Circle, A: Week-by-Week Problem Sets | 15 |
| Biology for NEET, Volume 2 | 3 | Objective Biology for NEET, Volume 1 | 1 |
| Biology Foundation for Class VIII | 9 | Objective Biology for NEET, Volume 2 | 1 |
| Biology Foundation for Class IX | 10 | Objective Questions in Mathematics for JEE Main and Advanced | 5 |
| Biology Foundation for Class X | 10 | Objective Questions in Physics for JEE Main and Advanced | 6 |
| Chemistry for NEET, Volume 1 | 4 | Physics for JEE, Volume 1 | 7 |
| Chemistry for NEET, Volume 2 | 4 | Physics for NEET, Volume 1 | 3 |
| Chemistry Foundation for Class VIII | 7 | Physics for NEET, Volume 2 | 4 |
| Chemistry Foundation for Class IX | 8 | Physics Foundation for Class VIII | 11 |
| Chemistry Foundation for Class X | 8 | Physics Foundation for Class IX | 11 |
| Compendium of Objective Questions in Civil Engineering, A | 15 | Physics Foundation for Class X | 12 |
| Computer Aptitude for Competitive Examinations | 16 | Problems and Solutions: International Olympiads on Astronomy and Astrophysics | 13 |
| Educative JEE (Third Edition) | 5 | Problems and Solutions: Physical Chemistry | 16 |
| Mathematical Circles (Russian Experience) | 14 | | |
| Mathematical Olympiad Challenges (Second Edition) | 12, 15 | | |
| Mathematical Techniques for Competitive Examinations | 12, 14 | | |

REGISTER WITH US

At Universities Press, we believe in sharing details pertaining to our books and the events that we conduct. Should you wish to receive such information by email or by post on a regular basis, you may please write to marketing@universitiespress.com and confirm:

Name and address for correspondence: _____

Email address: _____

STD code: _____ Landline: _____ Mobile: _____

Subject areas of interest: _____

Please tick the relevant box and confirm the mode by which you would like to receive information from us. By Email: By Post: Both:

We will be happy to register your details with our database and shall stay in touch.



Universities Press

PHYSICS
BIOLOGY
ENGINEERING AND TECHNOLOGY
GENERAL INTEREST
ENVIRONMENT
SCHOOL FOUNDATION
CHEMISTRY
COMPUTER SCIENCE
MANAGEMENT
GENERAL INTEREST
NEET
SCHOOL FOUNDATION
BIOLOGY
WILDLIFE
ENVIRONMENT
OLYMPIADS
BIOLOGY
ENVIRONMENT
WILDLIFE
SCHOOL FOUNDATION
JEE
MATHEMATICS
BIOLOGY
ENVIRONMENT
ENGINEERING AND TECHNOLOGY
WILDLIFE
MEDICAL
NEET
WILDLIFE
CHEMISTRY
ENGINEERING AND TECHNOLOGY
PHYSICS
JEE
BIOLOGY
GENERAL INTEREST
SCHOOL SCIENCE

Bengaluru 560 085. *Email:* bangalore@orientblackswan.com

Chennai 600 002. *Email:* chennai@orientblackswan.com

Guwahati 781 008. *Email:* guwahati@orientblackswan.com

Hyderabad 500 029. *Email:* hyderabad@orientblackswan.com; info@orientblackswan.com

Kolkata 700 072. *Email:* kolkata@orientblackswan.com

Mumbai 400 001. *Email:* mumbai@orientblackswan.com

New Delhi 110 002. *Email:* delhi@orientblackswan.com

Noida 201 301. *Email:* noida@orientblackswan.com

Patna 800 001. *Email:* patna@orientblackswan.com