

Kumar Mittal Physics Book

National Informatics Center (NIC) is a premier science & technology institution of India. This is the first time that a government institution is coming up with a book which will holistically cover the journey of transformation in governance. It combines multiple sectors and presents an overall picture of multiple initiatives.

The new Xam Idea for Class XII Physics 2020-21 has been thoroughly revised, diligently designed, and uniquely formatted in accordance with CBSE requirements and NCERT guidelines. The features of the new Xam Idea are as follows: 1. The book has been thoroughly revised as per the new CBSE Examination Paper design. 2. The book is divided into two Sections: Part–A and Part–B. 3. Part–A includes the following: · Each Chapter is summarised in ‘Basic Concepts’. · Important NCERT Textbook and NCERT Exemplar questions have been incorporated. · Previous Years’ Questions have been added under different sections according to their marks. · Objective Type Questions have been included as per new CBSE guidelines. These include Multiple Choice Questions, Very Short Answer Questions, and Fill in the Blanks carrying 1 mark each. · Short Answer Questions carrying 2 marks each and Long Answer Questions carrying 3 marks and 5 marks have also been added. · At the end of every chapter, Self-Assessment Test has been given to test the extent of grasp by the student. 4. Part–B includes the following: · CBSE Sample Question Paper 2020 with complete solution. · Blueprint as per latest CBSE Sample Question Paper and Examination Paper 2020. · Unsolved Model Question Papers for ample practice by the student. · Solved CBSE Examination Papers 2020 (55/1/1), (55/1/2) and (55/1/3). · Solved sets of remaining four regions’ CBSE Examination Papers are given in QR code. Strictly according to the latest syllabus prescribed by Central Board of Secondary Education (CBSE), StateBoard and Navodaya, Kendriya Vidyalayas etc. following CBSE curriculum based on NCERT guidelines.

- Chapter wise and Topic wise introduction to enable quick revision.
- Coverage of latest typologies of questions as per the Board latest Specimen papers
- Mind Maps to unlock the imagination and come up with new ideas.
- Concept videos to make learning simple.
- Latest Solved Paper with Topper’s Answers
- Previous Years’ Board Examination Questions and Marking scheme Answers with detailed explanation to facilitate exam-oriented preparation.
- Examiners comments & Answering Tips to aid in exam preparation.
- Includes Topics found Difficult & Suggestions for students.
- Dynamic QR code to keep the students updated for 2021 Exam paper or any further CISCE notifications/circulars

Text provides information about advanced OTFT (Organic thin film transistor) structures, their modeling and extraction of performance parameters, materials of individual layers, their molecular structures, basics of pi-conjugated semiconducting materials and their properties, OTFT charge transport phenomena and fabrication techniques. It includes applications of OTFTs such as single and dual gate OTFT based inverter circuits along with bootstrap techniques, SRAM cell designs based on different material and circuit configurations, light emitting diodes (LEDs). Besides this, application of dual gate OTFT in the logic gate, shift register, Flip-Flop, counter circuits will be included as well. Recent years have seen a growing interest in the field of thermodynamic properties of solids due to the development of advanced experimental and modeling tools. Predicting structural phase transitions and thermodynamic properties find important applications in condensed matter and materials science research, as well as in interdisciplinary research involving geophysics and Earth Sciences. The present edited book, with contributions from leading researchers around the world, is aimed to meet the need of academic and industrial

researchers, graduate students and non-specialists working in these fields. The book covers various experimental and theoretical techniques relevant to the subject.

This book is an indispensable resource for students and researchers wishing to develop a deeper understanding of one of the world's oldest and most multifaceted religious traditions. Sushil Mittal and Gene Thursby, leading scholars in the field, have brought together a rich variety of perspectives which reflect the current lively state of the field. Studying Hinduism is the result of cooperative work by accomplished specialists in several fields that include anthropology, art, comparative literature, history, philosophy, religious studies, and sociology.

Through these complementary and exciting approaches, students will gain a greater understanding of India's culture and traditions, to which Hinduism is integral. The book uses key critical terms and topics as points of entry into the subject, revealing that although Hinduism can be interpreted in sharply contrasting ways and set in widely varying contexts, it is endlessly fascinating and intriguing.

Here, for the first time, in a brilliant, panoramic portrait by the Pulitzer Prize-winning author of *The Making of the Atomic Bomb*, is the definitive, often shocking story of the politics and the science behind the development of the hydrogen bomb and the birth of the Cold War. Based on secret files in the United States and the former Soviet Union, this monumental work of history discloses how and why the United States decided to create the bomb that would dominate world politics for more than forty years.

Towards Smart World: Homes to Cities Using Internet of Things provides an overview of basic concepts from the rising of machines and communication to IoT for making cities smart, real-time applications domains, related technologies, and their possible solutions for handling relevant challenges. This book highlights the utilization of IoT for making cities smart and its underlying technologies in real-time application areas such as emergency departments, intelligent traffic systems, indoor and outdoor securities, automotive industries, environmental monitoring, business entrepreneurship, facial recognition, and motion-based object detection. Features The book covers the challenging issues related to sensors, detection, and tracking of moving objects, and solutions to handle relevant challenges. It contains the most recent research analysis in the domain of communications, signal processing, and computing sciences for facilitating smart homes, buildings, environmental conditions, and cities. It presents the readers with practical approaches and future direction for using IoT in smart cities and discusses how it deals with human dynamics, the ecosystem, and social objects and their relation. It describes the latest technological advances in IoT and visual surveillance with their implementations. This book is an ideal resource for IT professionals, researchers, undergraduate or postgraduate students, practitioners, and technology developers who are interested in gaining deeper knowledge and implementing IoT for smart cities, real-time applications areas, and technologies, and a possible set of solutions to handle relevant challenges. Dr. Lavanya Sharma is an Assistant Professor in the Amity Institute of Information Technology at Amity University UP, Noida, India. She has been a recipient of several prestigious awards during her academic career. She is an active nationally recognized researcher who has published numerous papers in her field.

Electromyography (EMG) is the study of muscle behaviour via electronic means, and is thus a technique fundamental to ergonomics, physiology and biomechanics. This text describes the principles of EMG and its application domains, focusing on anatomy, biology, muscle characteristics, physics, mechanics, EMG signal, noise/artifacts/errors, equipment/devices/techniques,

interpretation and computerised data acquisition, and analysis. The book provides a theoretical base, a strategic framework and user experiences.

This essential core textbook has been written for the Intermediate First Year Physics Course. The book aims to help students and understand that equations in physics express concepts, and encourages them to reason out ideas and improve their problem solving skills. The need to understand logic, basic concepts, and principles of physics has been stressed throughout the text. Numerous examples are given within the text to help students understand the principles and concepts being discussed and at the end of each chapter qualitative questions are given for students to solve. Simple mathematics has been used throughout and the book is well illustrated.

This text book is primarily intended for students who are preparing for the entrance tests of IIT-JEE/NEET/AIIMS and other esteemed colleges in same fields. This text is equally useful to the students preparing for their school exams. Main Features of the Book-1. Every concept is given in student friendly language with various solved problems and checkpoint questions. The solution is provided with problem solving approach and discussion. 2. Special attention is given to tricky topics (like- work energy theorem, conservative and non conservative forces, conservation of mechanical energy, work done by non conservative forces, power of pump and chain related problems) so that student can easily solve them with fun.. 3. To test the understanding level of students, multiple choice questions, conceptual questions, practice problems with previous years JEE Main and Advanced problems are provided at the end of the whole discussion. Number of dots indicates level of problem difficulty. Straightforward problems (basic level) are indicated by single dot (?), intermediate problems (JEE mains/NEET level) are indicated by double dots (??), whereas challenging problems (advanced level) are indicated by three dots (???). Answer keys with hints and solutions are provided at the end of the chapter.

Nanostructured Zinc Oxide covers the various routes for the synthesis of different types of nanostructured zinc oxide including; 1D (nanorods, nanowires etc.), 2D and 3D (nanosheets, nanoparticles, nanospheres etc.). This comprehensive overview provides readers with a clear understanding of the various parameters controlling morphologies. The book also reviews key properties of ZnO including optical, electronic, thermal, piezoelectric and surface properties and techniques in order to tailor key properties. There is a large emphasis in the book on ZnO nanostructures and their role in optoelectronics. ZnO is very interesting and widely investigated material for a number of applications. This book presents up-to-date information about the ZnO nanostructures-based applications such as gas sensing, pH sensing, photocatalysis, antibacterial activity, drug delivery, and electrodes for optoelectronics. Reviews methods to synthesize, tailor, and characterize 1D, 2D, and 3D zinc oxide nanostructured materials. Discusses key properties of zinc oxide nanostructured materials including optical, electronic, thermal, piezoelectric, and surface properties. Addresses most relevant zinc oxide applications in optoelectronics such as light-emitting diodes, solar cells, and sensors.

S Chand's ISC Mathematics is structured according to the latest syllabus as per the new CISCE (Council for the Indian School

Certificate Examinations), New Delhi, for ISC students taking classes XI & XII examinations.

Understanding ISC Mathematics, for class 11 - sections A, B & C, has been written by Mr. M.L. Aggarwal (Former Head of P.G. Department of Mathematics, D.A.V. College, Jalandhar) strictly according to the new syllabus prescribed by the Council for the Indian School Certificate Examinations, New Delhi in the year 2015 and onwards for students of class 11. A new feature - Typical Illustrative Examples and Typical Problems, has been added in some chapters for those students who want to attempt some more challenging problems. The entire matter in the book is given in a logical sequence so as to develop and strengthen the concepts of the students.

This book examines Multi-Criteria Decision Modelling (MCDM) methodologies and facilitates diverse ways for strategic decision-making in a variety of practical applications. This book also provides a pragmatic foundation for solving real-life problems in different scenarios of emerging global markets. Multi-Criteria Decision Modelling: Applicational Techniques and Case Studies depicts the use of sensitivity analysis and modelling and includes case studies to understand and illustrate challenging concepts. It also offers step-by-step comprehensive methodologies for the utilization of MCDM to a variety of situations. The book deliberates ways for companies to use these methods to their advantage in order to achieve sustainability. Furthermore, it also presents an overview of the major streams of thought and provides a holistic view of the latest research and development trends in modelling and optimization. FEATURES Offers a stepwise comprehensive methodology for the application of MCDM to a variety of situations Presents an overview of the major streams of thought present in the MCDM technique Provides a holistic view of the latest research and development trends in the emerging markets in terms of modelling and optimization using MCDM for different industrial sectors Illuminates a practical foundation in order to provide a guide to address the problems of emerging markets Enlightens the ways for companies to use these methods to their advantage to be able to achieve sustainability This book is a guide for those performing decision analysis for academic purposes as well as for researchers aspiring to expand their knowledge on MCDM problem solving.

Nanochemistry Nanophysics Nanoelectronics Molecular Machine Molecular Manufacturing Nanomedicine and Nanobiology Instruments and Methodology Environmental and Social Issues Basic Information Extensive Coverage Step-by-step Explanation Includes Modern Developments Explores Future Aspects Application-oriented Topics Appendices Glossary Chapter-end References Index

Sustainable Agriculture for Food Security: A Global Perspective takes an analytical approach to issues related to current agricultural practices. It looks at global geographical data and key statistical reports to aid readers in comparing, understanding, and making agricultural decisions. The book is divided into chapters with each dealing with a specific problem and its solutions, keeping in mind the context of geographical variations. The book first provides a historical overview of the socioeconomic importance of agriculture around the world along with a discussion on threats and opportunities in the agricultural sector. It goes on to explore the importance of water sources for agriculture, including rain-fed agriculture practices, water harvesting techniques,

sustainable irrigation practices, and irrigation water management. Guidance on the usage of agrochemicals and solutions to their detrimental effects from non-standardized consumption is also addressed. The volume also includes a discussion on organic farming methods, certification standards, and key restrictions in crop production. Part 2 goes on to examine postharvest management practices used in different geographical areas along with analysis on the role of technology and obstacles in implementation. The commercialization of agriculture through food processing, branding, and retailing is reviewed along with suggestions on available marketing platforms and promotional aspects. It goes on to outline the situational analysis of food adulteration as well as norms and regulations of food security at the international level. Lastly, the concept of biofortification is explained along with methods and strategies of biofortified food production. The impact of biofortification over socioeconomic development of a specific country is also analyzed. Written for a wide audience, this volume is a thoughtful overview and analysis of the increasingly necessary topic of sustainable agriculture for food security and will be of interest to faculty and research scholars, working professionals, social activists, policymakers, farmers, and institutions and organizations involved in agricultural education, research, and development.

The present book is designed for the first year engineering students of Jawaharlal Nehru Technology University, Hyderabad. The Salient Features of the book are: * It covers all the topics of the prescribed syllabus. * The different concepts and propositions are developed in terms of simple physical phenomenon supplemented with theoretical derivations in a concise and explanatory manner * A set of solved examples are given at the end of each chapter. * At the end of each chapter, a set of review questions, numerical questions and multiple choice questions have been given.

It's no secret that certain social groups have predominated India's business and trading history, with business traditionally being the preserve of particular 'Bania' communities. However, the past four or so decades have seen a widening of the social base of Indian capital, such that the social profile of Indian business has expanded beyond recognition, and entrepreneurship and commerce in India are no longer the exclusive bastion of the old mercantile castes. In this meticulously researched book ? acclaimed for being the first social history to document and understand India's new entrepreneurial groups ? Harish Damodaran looks to answer who the new 'wealth creators' are, as he traces the transitional entry of India's middle and lower peasant castes into the business world. Combining analytical rigour with journalistic flair, India's New Capitalists is an essential read for anyone seeking to understand the culture and evolution of business in contemporary South Asia.

This textbook fills the gap between the very basic and the highly advanced volumes that are widely available on the subject. It offers a concise but comprehensive overview of a number of topics, like general relativity, fission and fusion, which are otherwise only available with much more detail in other textbooks. Providing a general introduction to the underlying concepts (relativity, fission and fusion, fundamental forces), it allows readers to develop an idea of what these two research fields really involve. The book uses real-world examples to make the subject more attractive and encourage the use of mathematical formulae. Besides short scientists' biographies, diagrams, end-of-chapter problems and worked solutions are also included. Intended mainly for

students of scientific disciplines such as physics and chemistry who want to learn about the subject and/or the related techniques, it is also useful to high school teachers wanting to refresh or update their knowledge and to interested non-experts.

Physics Book

Nanocomposites have better adsorption capacity, selectivity, and stability than nanoparticles. Therefore, they find diversified applications in many areas. Recently, various methods for heavy metal detection from water have been extensively studied. The adsorption of various pollutants such as heavy metal ions and dyes from the contaminated water with the help of nanocomposites has attracted significant attention. This book presents a comprehensive discussion on wastewater research. It covers a vast background of the recent literature. It describes the applications of nanocomposites in various areas, including environmental science. Particularly, it is highly useful to researchers involved in the environmental and water research on nanocomposites and their applications. The book covers a broad research area of chemistry, physics, materials science, polymer science and engineering, and nanotechnology to present an interdisciplinary approach and also throws light on the recent advances in the field. Demonstrating methods for overcoming stability issues in paints, wax dispersions, cosmetics, food products, and other industrial applications, this reference probes theoretical and practical issues surrounding microemulsion science and technology. Featuring the work of 51 international experts and containing almost 1000 instructive tables, equations, and illustrations, this book reviews the performance of, and prospects for, experimental methods such as X-ray diffraction, transmission electron microscopy (TEM), light scattering, small angle neutron scattering, viscosimetry, and nuclear magnetic resonance (NMR) to characterize various aspects of the dispersed phase of microemulsions.

This book will strengthen a student's grasp of the laws of physics by applying them to practical situations, and problems that yield more easily to intuitive insight than brute-force methods and complex mathematics. These intriguing problems, chosen almost exclusively from classical (non-quantum) physics, are posed in accessible non-technical language requiring the student to select the right framework in which to analyse the situation and decide which branches of physics are involved. The level of sophistication needed to tackle most of the two hundred problems is that of the exceptional school student, the good undergraduate, or competent graduate student. The book will be valuable to undergraduates preparing for 'general physics' papers. It is hoped that even some physics professors will find the more difficult questions challenging. By contrast, mathematical demands are minimal, and do not go beyond elementary calculus. This intriguing book of physics problems should prove instructive, challenging and fun.

This book explains the basic principles of Discrete Mathematics and Structures in a clear systematic manner. A contemporary approach is adopted throughout the book. The book is divided in five sections. First section discusses Set Theory, Relations and Functions, Probability and Counting Techniques; second section is about Recurrence Relations and Propositional Logic; third section is related to Lattices and Boolean algebra; fourth section includes study of Graph and Trees and the last section is about Algebraic Structures and Finite State Machines. Suitable examples, illustrations and exercises are included throughout the book to

facilitate an easier understanding of the subject. The book would serve as a comprehensive text for students of Computer Science & Engineering, Computer Applications and Information Technologies.

In Search of Change Maestros documents the contributions of seven great Indian wealth creators and institution builders who thought out of the box and had the vision and fortitude to create world-class Indian corporations that have set global benchmarks. The compilation includes case studies of Kumar Mangalam Birla, M. Damodaran, Sajjan Jindal, K.V. Kamath, Sunil Bharti Mittal, A.M. Naik, and Kiran Mazumdar Shaw. This is a first-of-its-kind work that focuses on outstanding Indian corporate icons—their means, methods, and achievements—and in the process, creates an entirely new paradigm for evaluating Change Maestros and change leaders not only in the corporate world, but also in public life all over the world.

One of eighteen timeless classics for independent student reading and preparation for mainstream classrooms. Also thematically linked to core series such as Visions.

A modern introduction to Newtonian dynamics and the basics of special relativity, this book discusses standard topics such as Newton's laws of motion, energy, linear and angular momentum, rigid body dynamics, and oscillations, then goes on to introduce modern topics such as symmetries, phase space, nonlinear dynamics and chaos. The author presents Newton's equation of motion as a differential equation, bringing out key issues such as phase space and determinism in mechanical systems and helps introduce modern research topics such as chaos theory in a natural way. He highlights key assumptions of Newtonian mechanics and incorporates numerical solutions of many mechanical systems using MATLAB.

From Visual Surveillance to Internet of Things: Technology and Applications is an invaluable resource for students, academicians and researchers to explore the utilization of Internet of Things with visual surveillance and its underlying technologies in different application areas. Using a series of present and future applications – business insights, indoor-outdoor securities, smart grids, human detection and tracking, intelligent traffic monitoring, e-health department and many more – this book will support readers to obtain a deeper knowledge in implementing IoT with visual surveillance. The book offers comprehensive coverage of the most essential topics, including: The rise of machines and communications to IoT (3G, 5G) Tools and technologies of IoT with visual surveillance IoT with visual surveillance for real-time applications IoT architectures Challenging issues and novel solutions for realistic applications Mining and tracking of motion-based object data Image processing and analysis into the unified framework to understand both IOT and computer vision applications This book will be an ideal resource for IT professionals, researchers, under- or post-graduate students, practitioners, and technology developers who are interested in gaining a deeper knowledge in implementing IoT with visual surveillance, critical applications domains, technologies, and solutions to handle relevant challenges. Dr. Lavanya Sharma is an Assistant Professor in the Amity Institute of Information Technology at Amity University UP, Noida, India. She is a recipient of several prestigious awards during her academic career. She is an active nationally-recognized researcher who produces dozens of papers in her field. She has contributed as an Organizing Committee member and session chair at Springer and IEEE conferences. Prof. Pradeep K. Garg worked as a Vice Chancellor, Uttarakhand Technical University,

Dehradun. Presently he is working in the department of Civil Engineering, IIT Roorkee as a professor. Prof. Garg has published more than 300 technical papers in national and international conferences and journals. He has completed 26 research projects funded by various government agencies, guided 27 PhD candidates, and provided technical services to 84 consultancy projects on various aspects of Civil Engineering.

This book is targeted mainly to the undergraduate students of USA, UK and other European countries, and the M. Sc of Asian countries, but will be found useful for the graduate students, Graduate Record Examination (GRE), Teachers and Tutors. This is a by-product of lectures given at the Osmania University, University of Ottawa and University of Tebrez over several years, and is intended to assist the students in their assignments and examinations. The book covers a wide spectrum of disciplines in Modern Physics, and is mainly based on the actual examination papers of UK and the Indian Universities. The selected problems display a large variety and conform to syllabi which are currently being used in various countries. The book is divided into ten chapters. Each chapter begins with basic concepts containing a set of formulae and explanatory notes for quick reference, followed by a number of problems and their detailed solutions. The problems are judiciously selected and are arranged section-wise. The solutions are neither pedantic nor terse. The approach is straight forward and step-- step solutions are elaborately provided. More importantly the relevant formulas used for solving the problems can be located in the beginning of each chapter. There are approximately 150 line diagrams for illustration. Basic quantum mechanics, elementary calculus, vector calculus and Algebra are the pre-requisites.

“The Objective of Education is to prepare the young to Educate themselves throughout their Lives” This philosophy has always been followed by Gujarat Secondary Education Board (GSEB), whether through their education system framework or regular enhancement in curriculum. GSEB ensures better access, equality and quality in elementary education for school students. In order to achieve aforesaid objectives, Gujarat State Board of School Textbooks (GSSTB) has proposed a new syllabus for school textbooks, which will be aligned with NCERT. We at Oswaal Books, welcome the above decision of GSEB and have ensured our offerings include updated content, aligned with the latest syllabus as directed by the Board. Oswaal GSEB NCERT Solutions are designed as per the latest curriculum of Gujarat Board and emphasize on nurturing individuality thus enhancing one's innate potentials which help in increasing self-confidence. We believe that OSWAAL GSEB NCERT SOLUTIONS will help the students in school and after school in practicing and preparing extensively for both, Final Examinations as well as Competitive Examinations with utmost confidence! Some of the Key Highlights of Oswaal GSEB NCERT Solutions are: | Latest content: Strictly based on the latest GSEB Curriculum | GSSTB (NCERT) Textbook Questions: Fully Solved | Some Important Questions developed by ‘Oswaal Editorial Board’ | Chapter-wise & Topic-wise presentation | Chapter Objectives: A sneak peek into the chapter | Mind Map: A single page snapshot of the entire chapter | Quick Review: Concept-based study material | Tips & Tricks: Useful guidelines for attempting each question perfectly | Some Commonly Made Errors: Most common and unidentified errors made by students discussed | Expert Advice: Oswaal Expert Advice on how to score more! | Oswaal QR Codes: For a Digital Learning Experience

The thoroughly Revised & Updated 3rd Edition of Objective Biology Chapter-wise MCQ for NEET/ AIIMS is a collection of carefully selected MCQ's for Medical entrance exams. The book follows the pattern and flow of class 11 and 12 syllabus as prescribed by NCERT. The unique feature of the new edition is the inclusion of new exam-centric questions and marking of questions into Critical Thinking; Toughnut & Tricky. The book contains 'Chapter-wise MCQs' which covers all the important concepts and applications required to crack the mentioned exams. The book contains 38 chapters covering a total of around 3800 MCQs with solutions. The solutions to the questions is provided immediately after the chapter. The solutions have been prepared in a manner that a student can easily understand them. This is an ideal book to practice and revise the complete syllabus of the mentioned exams. The book will help to give finishing touches to your preparation of each chapter.

[Copyright: d1b8e43fb9aae265ab3568ce265cd773](#)