

Engineering Mechanics D S Kumar

Fluid Mechanics And Hydraulic Machines is designed for the course on fluid mechanics and hydraulic machines offered to the undergraduate students of mechanical and civil engineering. Written in a lucid style, the book lays emphasis on explaining the logic and physics of critical problems to develop analytical skills in the reader.

Explains the fundamental concepts and principles underlying the subject, illustrates the application of numerical methods to solve engineering problems with mathematical models, and introduces students to the use of computer applications to solve problems. A continuous step-by-step build up of the subject makes the book very student-friendly. All topics and sequentially coherent subtopics are carefully organized and explained distinctly within each chapter. An abundance of solved examples is provided to illustrate all phases of the topic under consideration. All chapters include several spreadsheet problems for modeling of physical phenomena, which enable the student to obtain graphical representations of physical quantities and perform numerical analysis of problems without recourse to a high-level computer language. Adequately equipped with numerous solved problems and exercises, this book provides sufficient material for a two-semester course. The book is essentially designed for all engineering students. It would also serve as a ready reference for practicing engineers and for those preparing for competitive examinations. It includes previous years' question papers and their solutions.

This comprehensive and well-written book provides a thorough understanding of the principles of modern physics, their relations, and their applications. Most of the developments in physics that took place during the twentieth century are called "modern"-something to be treated differently from the "classical" physics. This book offers a detailed presentation of a wide range of interesting topics, starting from the special theory of relativity, basics of quantum mechanics, atomic physics, spectroscopic studies of molecular structures, solid state physics, and proceeding all the way to exciting areas such as lasers, fibre optics and holography. An in-depth treatment of the different aspects of nuclear physics focuses on nuclear properties, nuclear models, fission, fusion, particle accelerators and detectors. The book concludes with a chapter on elementary interactions, symmetries, conservation laws, the quark model and the grand unified theory. Clear and readable, this book is eminently suitable as a text for B.Sc. (physics) course.

This book meets the requirements of undergraduate and postgraduate students pursuing courses in mechanical, production, electrical, metallurgical and aeronautical engineering. This self-contained text strikes a fine balance between conceptual clarity and practice problems, and focuses both on conventional graphical methods and emerging analytical approach in the treatment of subject matter. In keeping with technological advancement, the text gives detailed discussion on relatively recent areas of research such as function generation, path generation and mechanism synthesis using coupler curve, and number synthesis of kinematic chains. The text is fortified with fairly large number of solved examples and practice problems to further enhance the understanding of the otherwise complex concepts. Besides engineering students, those preparing for competitive examinations such as GATE and Indian Engineering Services (IES) will also find this book ideal for reference. KEY FEATURES ? Exhaustive treatment given to topics including gear drive and cam follower combination, analytical method of motion and conversion phenomenon. ? Simplified explanation of complex subject matter. ? Examples and exercises for clearer understanding of the concepts.

Fracture Mechanics is an essential tool to evaluate whether a component is likely to fail or not. This book has been written in a simple and step-wise manner to help readers familiarise with the basic and advanced topics. Additionally it has over 185 illustrations to further reinforce and simplify the learning process. With this coverage, the book will be useful to professionals and students of engineering.

This book focuses both on the basics and more complex topics in mechanical measurements such as measurement errors & statistical analysis of data, regression analysis, heat flux, measurement of pressure, and radiation properties of surfaces. End of chapter problems, solved illustrations, and exercise problems are presented throughout the book to augment learning. It is a useful reference for students in both undergraduate and postgraduate programs.

The book presents a comprehensive study of important topics in Mechanics of pure and applied sciences. It provides knowledge of scalar and vector in optimum depth to make the students understand the concepts of Mechanics in simple, coherent and lucid manner and grasp its principles & theory. It caters to the requirements of students of B.Sc. Pass and Honours courses. Students of engineering disciplines and the ones aspiring for competitive exams such as AIME and others, will also find it useful for their preparations.

Learn the hand-crafted notes on C programming Key Features Strengthens the foundations, as a detailed explanation of programming language concepts are given Lucid explanation of the concept Well thought-out, fully working programming examples End-of-chapter exercises that would help you practice the skills learned in the chapter Hand-crafted "KanNotes" at the end of the each chapter that would help the reader remember and revise the concepts covered in the chapter Focuses on how to think logically to solve a problem Description The new edition of this classic book has been thoroughly revamped, but remains faithful to the principles that have established it as a favourite amongst students, teachers and software professionals round the world. "Simplicity"- that has been the hallmark of this book in not only its previous sixteen English editions, but also in the Hindi, Gujarati, Japanese, Korean, Chinese and US editions. This book doesn't assume any programming background. It begins with the basics and steadily builds the pace so that the reader finds it easy to handle advanced topics towards the end of the book. What will you learn C Instructions Decision Control Instruction, Loop Control Instruction, Case Control Instruction Functions, Pointers, Recursion Data Types, The C Preprocessor Arrays, Strings Structures, Console Input/Output, File Input/Output Who this book is for Students, Programmers, researchers, and software developers who wish to learn the basics of C++ programming language. Table of Contents 1. Getting Started 2. C Instructions 3. Decision Control Instruction 4. More Complex Decision Making 5. Loop Control Instruction 6. More Complex Repetitions 7. Case Control Instruction 8. Functions 9. Pointers 10. Recursion 11. Data Types Revisited 12. The C Preprocessor 13. Arrays 14. Multidimensional Arrays 15. Strings 16. Handling Multiple Strings 17. Structures 18. Console Input/Output 19. File Input/Output 20. More Issues In Input/Output 21. Operations On Bits 22. Miscellaneous Features 23. Interview FAQs Appendix A- Compilation and Execution Appendix B- Precedence Table Appendix C- Chasing the Bugs Appendix D- ASCII Chart Periodic Tests I to IV, Course Tests I, II Index About the Authors Through his books and Quest Video Courses on C, C++, Java, Python, Data Structures, .NET, IoT, etc. Yashavant Kanetkar has created, molded and groomed lacs of IT careers in the last three decades. Yashavant's books and Quest videos have made a significant contribution in creating top-notch IT manpower in India and abroad. Yashavant's books are globally recognized and millions of students/professionals have benefitted from them. Yashavant's books have been translated into Hindi, Gujarati, Japanese, Korean and Chinese languages. Many of his books are published in India, USA, Japan, Singapore, Korea and China. Yashavant is a much sought after speaker in the IT field and has conducted seminars/workshops at TedEx, IITs, IIITs, NITs and global software companies. Yashavant has been honored with the prestigious "Distinguished Alumnus Award" by IIT Kanpur for his entrepreneurial, professional and academic excellence. This award was given to top 50 alumni of IIT Kanpur who have made a significant contribution

towards their profession and betterment of society in the last 50 years. His LinkedIn profile: [linkedin.com/in/yashavant-kanetkar-9775255](https://www.linkedin.com/in/yashavant-kanetkar-9775255)
The present book on Elements of Mechanical Engineering is meant for the engineering students of all branches at their first year level. It covers the new syllabus of Panjab Technical University, Jalandhar. However, it shall be useful to students of other Universities also. The book covers the basic principles of Thermodynamics, zeroth law of Thermodynamics and the concept of temperature in the first chapter.

"A Textbook of Engineering Mechanics" has been written especially for the students of B.E./B.Tech. of Himachal Pradesh Technical University (Hamirpur). It represents a comprehensive study of important topics of Engineering Mechanics for undergraduate students of Engineering in a brief, clear and lucid manner.

It is a long way from the first edition in 1976 to the present sixth edition in 1995. This edition is dedicated to the memory of Prof. S.P. Luthra (Once Head, Applied Mechanics Director, IIT Delhi) who wrote the foreword to its first edition. So many faculty members and students from different parts of the country and from abroad have accepted the text and contributed to its development. The book has been improved and updated with every edition.

We take great pleasure in presenting to the readers the second thoroughly revised edition of the book after a number of reprints. The suggestions received from the readers have been carefully incorporated in this edition and almost the entire subject matter has been reorganised, revised and rewritten.

You don't have to buy this book. Just read this till the end. You don't have to buy this book. Just read this till end & you will learn something that will change the way you do math forever. Warning: I am revealing this secret only to the first set of readers who will buy this book & plan to put this secret back inside the book once I have enough sales. So read this until the very end while you still can. School taught you the wrong way to do math. The way you were taught to do math, uses a lot of working memory. Working memory is the short term memory used to complete a mental task. You struggle because trying to do mental math the way you were taught in school, overloads your working memory. Let me show you what I mean with an example: Try to multiply the 73201×3 . To do this you multiply the following: $1 \times 3 = 0 \times 3 = 2 \times 3 = 3 \times 3 = 7 \times 3 =$ This wasn't hard, & it might have taken you just seconds to multiply the individual numbers. However, to get the final answer, you need to remember every single digit you calculated to put them back together. It takes effort to get the answer because you spend time trying to recall the numbers you already calculated. Math would be easier to do in your head if you didn't have to remember so many numbers. Imagine when you tried to multiply 73201×3 , if you could have come up with the answer, in the time it took you to multiply the individual numbers. Wouldn't you have solved the problem faster than the time it would have taken you to punch in the numbers inside a calculator? Do the opposite of what you were taught in school. The secret of doing mental math is to calculate from left to right instead of from right to left. This is the opposite of what you were taught in school. This works so well because it frees your working memory almost completely. It is called the LR Method where LR stands for Left to Right. Let's try to do the earlier example where we multiplied 73201×3 . This time multiply from left to right, so we get: $7 \times 3 = 21$, $3 \times 3 = 9$, $2 \times 3 = 6$, $0 \times 3 = 0$, $3 \times 3 = 9$, $1 \times 3 = 3$. Notice that you started to call out the answer before you even finished the whole multiplication problem. You don't have to remember a thing to recall & use later. So you end up doing math a lot faster. The Smart Choice. You could use what you learnt & apply it to solve math in the future. This might not be easy, because we just scratched the surface. I've already done the work for you. Why try to reinvent the wheel, when there is already a proven & tested system you can immediately apply. This book was first available in video format & has helped 10,000+ students from 132 countries. It is available at ofpad.com/mathcourse to enroll. This book was written to reach students who consume the information in text format. You can use the simple techniques in this book to do math faster than a calculator effortlessly in your head, even if you have no aptitude for math to begin with. Imagine waking up tomorrow being able to do lightning fast math in your head. Your family & friends will look at you like you are some kind of a genius. Since calculations are done in your head, you will acquire better mental habits in the process. So you will not just look like a genius. You will actually be one. Limited Time Bonus. Weekly training delivered through email is available for free as a bonus at the end of this book for the first set of readers. Once we have enough readers, this bonus will not be available for free. Why Price Is So Low. This book is priced at a ridiculous discount only to get our first set of readers. When we have enough readers the price will go up. Click Buy Now. Click "Buy Now" to lock your discounted price & free bonus, or you risk coming back at a later date or even a few minutes from now to see the price go up. Click the yellow button that says "Buy Now" and let's get started.

For B.E., B.Tech. And Engineering students of All Indian Technical Universities

This Book Presents A Thorough And Comprehensive Treatment Of Both The Basic As Well As The More Advanced Concepts In Fluid Mechanics. The Entire Range Of Topics Comprising Fluid Mechanics Has Been Systematically Organised And The Various Concepts Are Clearly Explained With The Help Of Several Solved Examples. Apart From The Fundamental Concepts, The Book Also Explains Fluid Dynamics, Flow Measurement, Turbulent And Open Channel Flows And Dimensional And Model Analysis. Boundary Layer Flows And Compressible Fluid Flows Have Been Suitably Highlighted. Turbines, Pumps And Other Hydraulic Systems Including Circuits, Valves, Motors And Ram Have Also Been Explained. The Book Provides 225 Fully Worked Out Examples And More Than 1600 Questions Including Numerical Problems And Objective Questions. The Book Would Serve As An Exhaustive Text For Both Undergraduate And Post- Graduate Students Of Mechanical, Civil And Chemical Engineering. Amie And Competitive Examination Candidates As Well As Practising Engineers Would Also Find This Book Very Useful.

This book is intended to be used as a textbook for a first course in fluid mechanics. It stresses on principles and takes the students through the various development in theory and applications. A number of exercises are given at the end of each chapter, all of which have been successfully class-tested by the authors. It will be ideally suited for students taking an undergraduate degree in engineering in all universities in India.

The contents of this book covers the material required in the Fluid Mechanics Graduate Core Course (MEEN-621) and in Advanced Fluid Mechanics, a Ph. D-level elective course (MEEN-622), both of which I have been teaching at Texas A&M University for the past two decades. While there are numerous undergraduate fluid mechanics texts on the market for engineering students and instructors to choose from, there are only limited texts that comprehensively address the particular needs of graduate engineering fluid mechanics courses. To complement the lecture materials, the instructors more often recommend several texts, each of which treats special topics of fluid mechanics. This circumstance and the need to have a textbook that covers the materials needed in the above courses gave the impetus to provide the graduate engineering community with a coherent textbook that comprehensively addresses their needs for an advanced fluid mechanics text. Although this text book is primarily aimed at mechanical engineering students, it is equally suitable for aerospace engineering, civil engineering, other engineering disciplines, and especially those practicing professionals who perform CFD-simulation on a routine basis and would like to know more about the underlying physics of the commercial codes they use. Furthermore, it is suitable for self study, provided that the reader has a sufficient knowledge of calculus and differential equations. In the past, because of the lack of advanced computational capability, the subject of fluid mechanics was artificially subdivided into inviscid, viscous (laminar, turbulent), incompressible, compressible, subsonic, supersonic and hypersonic flows.

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