

Digital Signal Processing Concepts Using Python

Author: B. Kanmani

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Product Description

In this book, we have addressed various concepts in the typical Under Graduate course on, 'Digital Signal Processing'. The focus is to have a quick overview of the intended concept. This book is not a replacement to the prescribed text book in the curriculum. However, through the examples illustrated, it helps comprehend the concept. In addition, every Chapter of the book is accompanied by the link to the Python code is developed on the Goggle Colaboratory and hence is an Open source programming environment. No prior knowledge of Python is essential; however, and experience in any programming language will prove useful. The programming approach is to be able to develop the code for the concept from the mathematical equation and avoid the use of in-built functions. We would like to add that, we are using Python, purely to help comprehend the signal processing concept and not develop and efficient Python code. Experienced programmers may build alternate and efficient code. The motivation for coming out with this compilation, is because, students are usually introduced to the required pre-requisitions in earlier courses. For example, the 'Engineering Mathematics', course is likely to have introduced Calculus (integration, differential equation, difference equation), Laplace Transform, Fourier series, Fourier Transform, Z-Transform. The courses on 'Analog Electronic Circuits and 'Network Analysis', is likely to have introduced basic electronic circuits including resistors, capacitors, inductors and Operational amplifiers, that require the need to obtain the transfer function, the response to a given output. The student is usually introduced to another independent programming language (C/C++/ Python/Matlab /Sci-lab/ R programming/any other), where the emphasis is on the syntax of the language. In this Book, we provide a brief introduction to every pre-requisite; explain the concept, together with few examples for every concept. In addition, wherever applicable, different methods of arriving at the given solution are also included. The concept of Digital Signal Processing is complete, even without any reference to Python. The reference to Python is purely for students to explore further.

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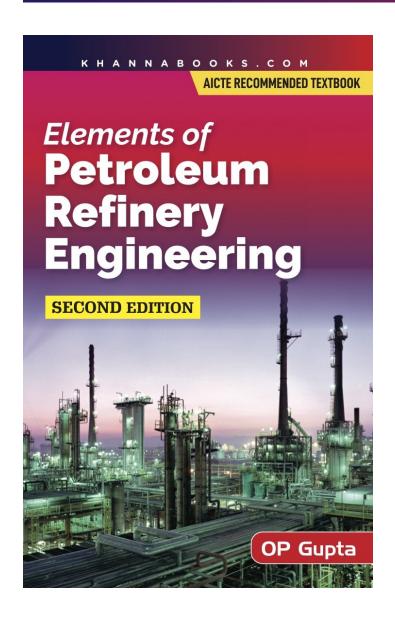
PREFACE ACKNOWLEDGEMENT CHAPTER 1: Digital Signals. CHAPTER 2: The Sampling Process. CHAPTER 3: Classification of Digital Systems. CHAPTER 4: Representation and Classification of Linear Time Invariant Systems. CHAPTER 5: Time Domain Analysis of Linear Time Invariant Systems. CHAPTER 6: Frequency Domain Analysis of Linear Time Invariant System. CHAPTER 7: Design and Analysis of RIF Filters. CHAPTER 8: Analog Butterworth Filters. CHAPTER 9: Design Analysis of IIR Filters.



Author

Dr.B Kanmani, obtained her Bachelors in Electronics and Communication Engineering from Nagarujuna University in 1987, M. Tech. in Digital communication form India Institute of Technology, Kanpur in 1990, and PhD from the Indian Institute of Science Bangalore (IISc) in the year 2006. Born in the traditional and ancient city of Tiruchirapalli, she has had her initial education in the states of Maharashtra, Andhra Pradesh and Karnataka. She has been with BMS College of Engineering, Bangalore, since 1995, and has to her credit publications in the domain of Diffuse Optical Tomography; Signal processing; Signal Processing Education; and Engineering Education. She has personally presented papers in conferences held at Singapore, Dubai, Florida and Arizona. She has successfully completed AICTE funded MODROBS and the IIPC projects. She has published a Book on **Effective Implementation of OBE leading to Accreditation',** through the ISTE, WPLP, AICTE, project. She has uploaded few lectures on 'Digital Signal Processing' and 'Outcome Based Education', on her **You Tube Channel-Kanmani's Lectures'.** She has served as Dean-Academics, for a period of two years; and as the Head of the Department, for a period of fifteen years. She handles the under-graduate course, on Signal Processing and Communication. Her prior employment as a teaching faculty was with Thadomal Shahani College of Engineering (Mumbai) and K L College of Engineering (Guntur). She is Senior Member IEEE, Fellow IETE and Life Member ISTE.





Elements of Petroleum Refinery Engineering

Author: O.P. Gupta

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Product Description

This book is prepared in a simple, lucid &easy understandable language with special emphasis on crude oil refining technologies and scenario in Indian context. This book is meant for the students, teachers, practicing engineer, consultants and policy makers on petroleum refining. Extensive use of Internet resources has been made in gathering the relevant information and the subject matter has been presented in a simple lucid manner for easy understanding of the subject. This book is targeted to benefit the following: 1. Diploma in engineering students. 2. Degree in engineering students (B. Tech (Chemical Engineering,) B. Tech (Petroleum Engineering, B. Tech (Petrochemical Engineering), B. Tech (Aeronautical Engineering), AMIE, AMIICHE, Students etc. 3. Tech students of various disciplines pursuing courses on petroleum refining. 4. Faculty members/ Teaching staff of Engineering colleges/IIT's/NIT's etc. 5. Practicing petroleum engineers/consultants/refiners in various private sector/ public sector undertakings, state/ central government departments, NGO's etc. 6. Students of foreign universities of developing countries pursuing diploma/ degree/ postgraduate courses in various engineering disciplines having a paper in petroleum refinery engineering. 7. The scope and coverage of the subject matter presented can be gauged from glancing the contents portion of the book to judge its suitability and relevance for a particular target group.

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Preface

Definition

Abbreviations

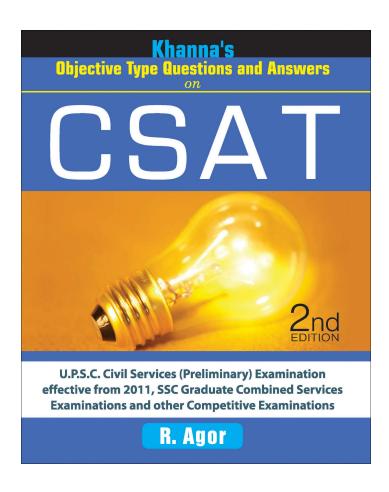
Chapter 1: Origin, Composition, Classification, Pretreatment & Transportation of Petroleum Crude Oil. Chapter 2: Indian Crude Oil & Oil Refineries. Chapter 3: Processing of Crude Oil-Refinery Operation & Products. Chapter 4: Thermal and Catalytic Cracking. Chapter 5: Thermal and Catalytic Reforming. Chapter 6: Polymerization Alkylation and Isomerization Processes. Chapter 7: Purification of Petroleum Products. Chapter 8: Properties of Petroleum Products. Chapter 9: Requisites of Good Quality Petroleum Products. Chapter 10: Storage and Handling of Petroleum Product. Chapter 11: General Appendix. Chapter 12: Objective Type Q&A in Petroleum Refinery. References/ Bibliography/Further Reading Subject Index



Author

O.P. Gupta Om Prakash Gupta is basically being a chemical engineer, he has a practicing experience of efficient Energy management and HR functions in steel Industry for more than three decades. privileged to be the youngest writer of technical books in the country (for he had written his first book at the age of 24 years while doing M. Tech. at I.I.T Kanpur in 1979), he has authored many frontline books for engineering students. besides, being the regular faculty member in technical courses for Management Trainees (Technical), he has also visited England and France on a study tour sponsored by United Nations Development Program (UNDP) to study the scope of energy conservation in steel plants in 1987.





Khanna's CSAT [Objective Type Ques. & Ans.]

Author: R. Agor

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Product Description

The author feels great pleasure in presenting this comprehensive treatise for the candidates aspiring for Civil Services (preliminary) Examination as per the revised syllabus and pattern effective from 2011 and all other competitive examinations. This has been an endeavor of the author to compile the necessary knowledge for the Examination through the multiple type questions and answers on various subjects and current affairs.



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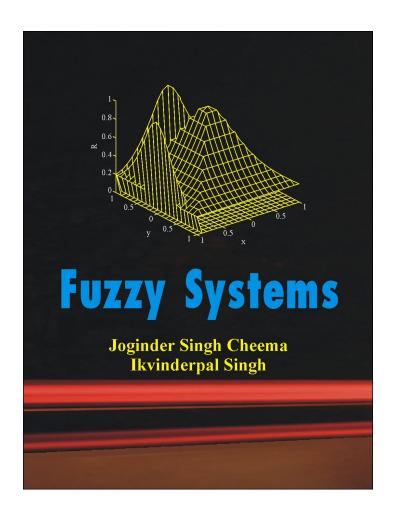
Chapter 24: Basic Of Numeracy. Chapter 25: General Science. Chapter 26: Indian Resources & Development.

Chapter 27: Indian Minerals & Energy Resources. Chapter 28: The Salient Features of India Constitution. Chapter 29: The Components of Government and Their Functions. Chapter 30: Judiciary of India. Chapter 31: Preventive and Social Medicine. Chapter 32: Functions in Human Body. Chapter 33: The World Oceans and their Configurations. Chapter 34: English Comprehension.

Author

R. Agor Lecturer in Civil Engineering (Retd.) Technical Education, Delhi.





Fuzzy Systems

Author: Ikvinderpal Singh

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Product Description

This book is meant for a wide range of readers, especially college and university students wishing to learn basic as well as advanced processes and techniques in Fuzzy systems. It can also be meant for programmers who may be involved in programming based on the Fuzzy system applications. Modern aspects of fuzzy systems have been introduced from the first principles and discussed in an easy manner. So that a beginner can grasp the concepts of Fuzzy logic, fuzzy sets, fuzzy relations, fuzzy reasoning, fuzzy probability, fuzzy expert systems etc. each chapter contains solved example problems and exercise problems.



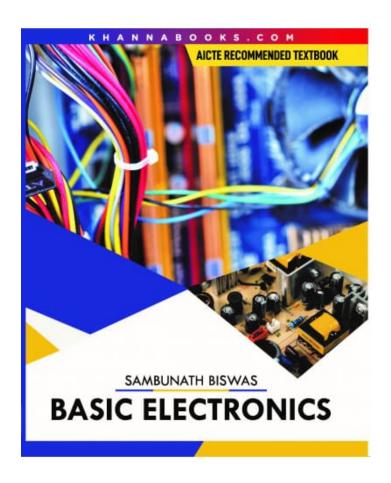
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Author

Ikvinderpal Singh Ikvinderpal Singh, is Lecturer of P.G. Deptt. Of Computer Science & Applications, Khalsa College, Amritsar which is a premier institute in North India. He obtained his MCA with distinction from Guru Nanak Dev University, Amritsar. He has always been excellence right from his student carrer. He has written five books. He brought name for himself when he topped the college in B.Sc. His other areas of interest include Fuzzy systems, digital electronics and java programming.





Basic Electronics

Author: Sambunath Biswas

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Product Description

This is an age of Electronics. At the dawn of the new millennium, it is no denying the fact that electronics has influenced the lifestyles of mankind in a manner never seen before. In order to understand the fundamentals of electronics, basic electronics is now taught as a compulsory subject for students of all branches of engineering. This book is planned to meet the requirements of a good and up-to-date book on basic electronics. The book discusses in a clear and concise way the fundamental principles and applications of basic electronics. The readers should find the book interesting particularly with large number of objective questions, solved problems and exercise problems.



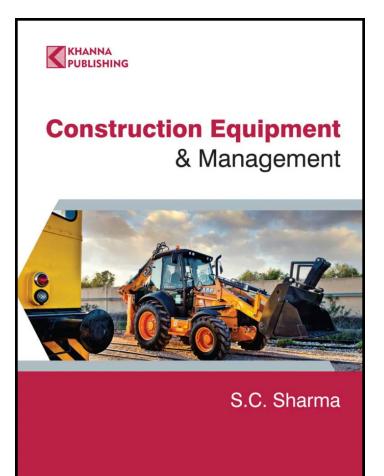
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Author

Sambunath Biswas Dr. Sambunath Biswas had his schooling from Howrah Akshya Sikshayatan. He then joined the St. Xaviers College for the B.Sc(Hons) degree in Physics from the University of Calcutta. Subsequently, he obtained the B.Tech and M.Tech degrees in Radio Physics and Electronics from University of Calcutta in 1967 and 1968 respectively. Later on , he obtained the degree of Doctor of Philosophy from the University of Calcutta in Radio Physics and Electronics. He is also winner of the PRS award of the University of Calcutta. He is a MOVAT medalist of the University of Calcutta. In March 1972, he joined Dept. of Electronics and Telecommunication Engineering, Bengal Engineering College as a lecturer. At present, he is working in the same dept. as a Professor. He was the Head of the Dept. of Electronics and Telecommunication Engineering during the period April 1988 to March 1989 and April 1995 to march 1998. he visited the federal Republic of Germany on DAAD Fellowship during the periods December 1979 to March 1981 and also in 1992.





Construction Equipment & Management

Author: S.C. Sharma

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Product Description

The book will help the students to understand various equipment various equipment used in different types of construction works, and aspects related to the management of theses construction equipment. The book will meet the requirement of construction engineers to become thoroughly familiar with the working, application, upkeep, and optimizing the production of the wide range of modern construction equipment.



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Chapter 2: Maintenance Management.

Chapter 3: Economics of Construction Equipment.

Chapter 4: Safety Management in Construction.

PART -II EARTHWORK EQUIPMENT

Chapter 5: Earth-Moving Equipment.

Chapter 6: Excavators.

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Chapter 8: Finishing/Grading Equipment.

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PART -III CONCRETE AND ASPHALT PLANTS

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Chapter 14: Drilling and Blasting Equipment.

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Chapter 19: Hoisting Equipment.

Chapter 20: Transportation Equipment for Materials Handling.

Chapter 21: Conveying Equipment.

Chapter 22: Latest Developments in Construction.



Author

S.C. Sharma after graduation in 1966 joined as lecturer in Mechanical Engineering. He had been associated for more than 4 decades in various fields including learning and management of projects in India and abroad in different capacities. While working Hydro power projects for more than 15 years he has actively associated with various environmental and rehabilitation & resettlement issues and successfully resolved various complicated issues. He has also worked as consultant for matters related to safety, environment and R & R. He has written about a dozen books on subjects related to engineering and management including management of projects.

