

Solution Manual Digital Communication Shanmugam

Digital and Analog Communication Systems
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Solutions Manual to Accompany Digital and Analog Communication Systems
A Study on the Tone-Reservation Technique for Peak-to-Average Power Ratio Reduction in OFDM Systems
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Communication Theory Information Theory and Coding
Fading and Shadowing in Wireless Systems
Communication Systems - II
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Principles of Communications
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Computer Sciences: Electronic universe
Bibliographic Guide to Business and Economics
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Satellite Communications Systems
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BTL Talks and Papers
Basics of Communications and Coding
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provides a detailed unified treatment of theoretical and practical aspects of digital and analog communication systems with emphasis on digital communication systems integrates theory keeping theoretical details to a minimum with over 60 practical worked examples illustrating real life methods emphasizes deriving design equations that relate performance of functional blocks to design parameters illustrates how to trade off between power band width and equipment complexity while maintaining an acceptable quality of performance material is modularized so that appropriate portions can be selected to teach several different courses includes over 300 problems and an annotated bibliography in each chapter

analysis tools such as fourier series fourier transforms signals systems and spectral densities are discussed in the second chapter introduction is presented in the first chapter third chapter presents additional analysis techniques such as probability random variables distribution functions and density functions probability models and random processes are also discussed noise representation sources noise factor noise temperature filtering of noise noise bandwidth and performance of am fm in presence of noise is discussed in fourth chapter analog pulse modulation is presented in fifth chapter sampling pam pam tdm are discussed in this chapter sixth chapter deals with digital pulse modulation methods such as pcm dm adm and dpcm seventh chapter presents digital multiplexers line coding synchronization scramblers isi eye patterns and equalization techniques digital modulation is presented in eighth chapter phase shift keying frequency shift keying qpsk qam and msk are presented last chapter deals with error performance of these techniques using matched filter

amplitude modulation and angle modulation are discussed in first two chapters am fm analysis equations modulators detectors transmission and reception are thoroughly presented ssb dsb vsb fdm are also discussed noise theory is given in third chapter it includes random variables probability random processes and correlation functions noise factor noise temperature and mathematical analysis of noise is presented performance of modulation systems in the presence of noise is explained in fourth chapter figure of merit capture effect and threshold effect are also presented last chapter presents information theory entropy information rate discrete memoryless source source coding shannon s theorems are also given in detail mutual information and channel capacity are also presented

various measures of information are discussed in first chapter information rate entropy and mark off models are presented second and third chapter deals with source coding shannon s encoding algorithm discrete communication channels mutual information shannon s first theorem are also presented huffman coding and shannon fano coding is also discussed continuous channels are discussed in fourth chapter channel coding theorem and channel capacity theorems are also presented block codes are discussed in chapter fifth sixth and seventh linear block codes hamming codes syndrome decoding is presented in detail structure and properties of cyclic codes encoding and syndrome decoding for cyclic codes is also discussed additional cyclic codes such as rs codes golay codes burst error correction is also discussed last chapter presents convolutional codes time domain transform domain approach code tree code trellis state diagram viterbi decoding is discussed in detail

the author explores the impediments to efficient wireless transmission and techniques and proposes ways to mitigate these problems problems presented include both fading and shadowing which increase the possibility of outage in wireless systems

introduction in first chapter includes various topics given in the book second chapter deals with information theory that includes modes of sources and channels information and entropy source coding discrete memoryless channels mutual information and shannon s theorems are given linear block codes cyclic codes hamming codes syndrome decoding convolutional codes are given in third chapter spread spectrum communication includes pseudo noise sequences direct sequence and frequency hop spread spectrum it is presented in fourth chapter multiple access techniques are reviewed in fifth chapter sixth chapter deals with satellite communications satellite orbits satellite access earth station transponder frequency reuse link budget vsat and msat are presented fibre optic communication is introduced in seventh chapter light propagation in fiber losses modes dispersion light sources and detectors fiber optic link are presented in this chapter

this updated and revised edition offers a broad yet rigorous introduction to communication theory contains an excellent account of noise effects in analog and digital communication systems followed by introductory treatments of detection estimation information and coding theory new to this edition sections on trellis coded modulation and carrier reconstruction material on interference demonstrating the difference between linear and nonlinear systems updates on optical communication links and feedback channels features scores of new

examples and problems as well as computer exercises using mathematics packages such as matlab and mathcad to facilitate students understanding of concepts and applications

the included cd rom contains powerpoint based animated presentations designed to reinforce certain examples within the book it also contains pdf files with full color versions of selected figures from the book

contains nearly three hundred articles that provide information about various aspects of the computer sciences discussing the history of computing software and hardware the social applications of computers and the impact of computers on society includes illustrations time lines glossaries and indexes

satellite systems have advanced considerably since the first edition of this title was published the second edition analyzes the construction of various types of satellite communications systems examines the interaction of components within these structures as well as the relationship between them and their environment covers everything from the birth of these systems to their prospects for the future packed with updated examples

intended to show how to attain reliable digital communications and coding this book covers subjects such as fourier theory digital signaling methods probability theory and noisy channels moreover it goes beyond standard treatments to cover emerging topics that will soon become commonplace in this rapidly changing field throughout the topics selected are those in which the mathematics is both conceptually straightforward and useful in other contexts carefully worked out exercises at the end of each chapter illustrate the material presented and subsidiary themes advanced students and academics in communications in the field of electrical engineering will appreciate the unusually rigorous and realistic approach to the subject students and academics in physics computer science and mathematics concerned with communications will also find the book of interest

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Introduction

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