

Computer Networks Data Communication And Internet

Data Communications and Computer Networks is designed as quick reference guide for important undergraduate computer courses. The organized and accessible format of this book allows students to learn the important concepts in an easy-to-understand, intended primarily as a textbook for the students of computer science and engineering, electronics and communication engineering, master of computer applications (MCA), and those offering IT courses, the book provides a comprehensive coverage of the subject. Basic elements of communication such as data, signal and channel along with their characteristics such as bandwidth, bit internal and bit rate have been explained. Contents related to guided and unguided transmission media, Bluetooth wireless technology, developed for Personal Area Network (PAN) and issues related to routing covering popular routing algorithms namely RIP, OSPF and BGP, have been introduced in the book. Various aspects of data link control along with their application in HDLC network and techniques such as encoding, multiplexing and encryption/decryption are presented in detail. Characteristics and implementation of PSTN, SONET, ATM, LAN, PACKET RADIO network, Cellular telephone network and Satellite network have also been explained. Different aspects of IEEE 802.11 WLAN and congestion control protocols have also been discussed in the book. Key Features • Each chapter is divided into section and subsection to provide flexibility in curriculum design. • The text contains numerous solved examples, and illustrations to bring clarity to the subject and enhance its understanding. • Review questions given at the end of each chapter, are meant to enable the teacher to test student's grasping of the subject.

A Comprehensive coverage of Digital communication, Data Communication Protocols and Mobile Computing Covers: " Multiplexing & Multiple accesses" Radio Communications- Terrestrial & Satellite" Error Detection & Correction" ISO/ OSI Protocol Architecture" Wired Internet DNS, RADIUS, Firewalls, VPN" Cellular Mobile Communication" GPS, CTI, Wireless Internet" Multimedia Communication over IP Networks Data Communication And Computer Networks Vikas Publishing House

The text book is written in simple and easily understandable language. This book can be used as a self-study guide for computer science students. I made (Dr. Prakash Kumar) sincere attempts to analyse every important topic completely and put before the reader of this book in the best presentable form. This book is uniquely different from many other books in a number of ways. Some of the unique features of the book are as under: Beginner to advanced approach to the subject. Simple and easy understandable language. Include examples to illustrate concept. Systematic and sequential arrangement of different topics. It can be used for one semester or one quarter course. Eminently suitable for self study. Detailed study of important topics such as Communication system, OSI Model, Ethernet LAN, Network security and Cryptography.

Data Communication Principles for Fixed and Wireless Networks focuses on the physical and data link layers. Included are examples that apply to a diversified range of higher level protocols such as TCP/IP, OSI and packet based wireless networks. Performance modeling is introduced for beginners requiring basic mathematics. Separate discussion has been included on wireless cellular networks performance and on the simulation of networks. Throughout the book, wireless LANs has been given the same level of treatment as fixed network protocols. It is assumed that readers would be familiar with basic mathematics and have some knowledge of binary number systems. Data Communication Principles for Fixed and Wireless Networks is for students at the senior undergraduate and first year graduate levels. It can also be used as a reference work for professionals working in the areas of data networks, computer networks and internet protocols.

Balancing the most technical concepts with practical everyday issues, DATABASE COMMUNICATIONS AND COMPUTER NETWORKS, 8e provides thorough coverage of the basic features, operations, and limitations of different types of computer networks--making it the ideal resource for future business managers, computer programmers, system designers, as well as home computer users. Offering a comprehensive introduction to computer networks and data communications, the book includes coverage of the language of computer networks as well as the effects of data communications on business and society. It provides full coverage of wireless technologies, industry convergence, compression techniques, network security, LAN technologies, VoIP, and error detection and correction. The Eighth Edition also offers up-to-the-minute coverage of near field communications, updated USB interface, lightning interface, and IEEE 802.11 ac and ad wireless standards, firewall updates, router security problems, the Internet of Things, cloud computing, zero-client workstations, and Internet domain names. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Data communications and computer networks are becoming increasingly more important--today's business world could not function without either. DATABASE COMMUNICATIONS AND COMPUTER NETWORKS offers a balance between technical and practical aspects of data communication. Business managers, computer programmers, system designers, and home computer users alike need a through understanding of the basic features, operations, and limitations of different types of computer networks. DATABASE COMMUNICATIONS AND COMPUTER NETWORKS introduces concepts that help the reader achieve an in-depth understanding of the often complex topic of data communications and computer networks by balancing the more technical aspects and the everyday practical aspects. The sixth edition retains many of the elements that made the fifth edition so popular, including readability and coverage of the most current technologies. This book offers full coverage of wireless technologies, industry convergence, compression techniques, network security, LAN technologies, VoIP, and expanded coverage of error detection and correction. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Computer Networks MCQs: Multiple Choice Questions and Answers (Quiz & Tests with Answer Keys) PDF, Networking Worksheets & Quick Study Guide covers exam review worksheets to solve problems with 2000 solved MCQs. "Computer Networks MCQ" PDF with answers covers concepts, theory and analytical assessment tests. "Computer Networks Quiz" PDF book helps to practice test questions from exam prep notes. Networking study guide provides 2000 verbal, quantitative, and analytical reasoning solved past question papers MCQs. Computer Networks Multiple Choice Questions and Answers PDF download, a book covers solved quiz questions and answers on chapters: Analog transmission, bandwidth utilization: multiplexing and spreading, computer networking, congestion control and quality of service, connecting LANs, backbone networks and virtual LANs, cryptography, data and signals, data communications, data link control, data transmission: telephone and cable networks, digital transmission, domain name system, error detection and correction, multimedia, multiple access, network layer: address mapping, error reporting and multicasting, network layer: delivery, forwarding, and routing, network layer: internet protocol, network layer: logical addressing, network management: SNMP, network models, network security, process to process delivery: UDP, TCP and SCTP, remote logging, electronic mail and file transfer, security in the internet: IPSEC, SSUTLS, PGP, VPN and firewalls, SONET, switching, transmission media, virtual circuit networks: frame relay and ATM, wired LANs: Ethernet, wireless LANs, wireless wans: cellular telephone and satellite networks, www and http worksheets for college and university revision guide. "Computer Networks Quiz Questions and Answers" PDF download with free sample test covers beginner's questions and mock

tests with exam workbook answer key. Computer networks MCQs book, a quick study guide from textbooks and lecture notes provides exam practice tests. "Computer Networks Worksheets" PDF book with answers covers problem solving in self-assessment workbook from computer science textbooks with past papers worksheets as: Worksheet 1: Analog Transmission MCQs Worksheet 2: Bandwidth Utilization: Multiplexing and Spreading MCQs Worksheet 3: Computer Networking MCQs Worksheet 4: Congestion Control and Quality of Service MCQs Worksheet 5: Connecting LANs, Backbone Networks and Virtual LANs MCQs Worksheet 6: Cryptography MCQs Worksheet 7: Data and Signals MCQs Worksheet 8: Data Communications MCQs Worksheet 9: Data Link Control MCQs Worksheet 10: Data Transmission: Telephone and Cable Networks MCQs Worksheet 11: Digital Transmission MCQs Worksheet 12: Domain Name System MCQs Worksheet 13: Error Detection and Correction MCQs Worksheet 14: Multimedia MCQs Worksheet 15: Multiple Access MCQs Worksheet 16: Network Layer: Address Mapping, Error Reporting and Multicasting MCQs Worksheet 17: Network Layer: Delivery, Forwarding, and Routing MCQs Worksheet 18: Network Layer: Internet Protocol MCQs Worksheet 19: Network Layer: Logical Addressing MCQs Worksheet 20: Network Management: SNMP MCQs Worksheet 21: Network Models MCQs Worksheet 22: Network Security MCQs Worksheet 23: Process to Process Delivery: UDP, TCP and SCTP MCQs Worksheet 24: Remote Logging, Electronic Mail and File Transfer MCQs Worksheet 25: Security in the Internet: IPsec, SSL/TLS, PGP, VPN and Firewalls MCQs Worksheet 26: SONET MCQs Worksheet 27: Switching MCQs Worksheet 28: Transmission Media MCQs Worksheet 29: Virtual Circuit Networks: Frame Relay and ATM MCQs Worksheet 30: Wired LANs: Ethernet MCQs Worksheet 31: Wireless LANs MCQs Worksheet 32: Wireless WANs: Cellular Telephone and Satellite Networks MCQs Worksheet 33: WWW and HTTP MCQs Practice Analog Transmission MCQ PDF with answers to solve MCQ test questions: Analog to analog conversion, digital to analog conversion, amplitude modulation, computer networking, and return to zero. Practice Bandwidth Utilization: Multiplexing and Spreading MCQ PDF with answers to solve MCQ test questions: Multiplexers, multiplexing techniques, network multiplexing, frequency division multiplexing, multilevel multiplexing, time division multiplexing, wavelength division multiplexing, amplitude modulation, computer networks, data rate and signals, digital signal service, and spread spectrum. Practice Computer Networking MCQ PDF with answers to solve MCQ test questions: Networking basics, what is network, network topology, star topology, protocols and standards, switching in networks, and what is internet. Practice Congestion Control and Quality of Service MCQ PDF with answers to solve MCQ test questions: Congestion control, quality of service, techniques to improve QoS, analysis of algorithms, integrated services, network congestion, networking basics, scheduling, and switched networks. Practice Connecting LANs, Backbone Networks and Virtual LANs MCQ PDF with answers to solve MCQ test questions: Backbone network, bridges, configuration management, connecting devices, networking basics, physical layer, repeaters, VLANs configuration, and wireless communication. Practice Cryptography MCQ PDF with answers to solve MCQ test questions: Introduction to cryptography, asymmetric key cryptography, ciphers, data encryption standard, network security, networks SNMP protocol, and Symmetric Key Cryptography (SKC). Practice Data and Signals MCQ PDF with answers to solve MCQ test questions: Data rate and signals, data bandwidth, data rate limit, analog and digital signal, composite signals, digital signals, baseband transmission, bit length, bit rate, latency, network performance, noiseless channel, period and frequency, periodic and non-periodic signal, periodic analog signals, port addresses, and transmission impairment. Practice Data Communications MCQ PDF with answers to solve MCQ test questions: Data communications, data flow, data packets, computer networking, computer networks, network protocols, network security, network topology, star topology, and standard Ethernet. Practice Data Link Control MCQ PDF with answers to solve MCQ test questions: Data link layer, authentication protocols, data packets, byte stuffing, flow and error control, framing, HDLC, network protocols, point to point protocol, noiseless channel, and noisy channels. Practice Data Transmission: Telephone and Cable Networks MCQ PDF with answers to solve MCQ test questions: Cable TV network, telephone networks, ADSL, data bandwidth, data rate and signals, data transfer cable TV, dial up modems, digital subscriber line, downstream data band, and transport layer. Practice Digital Transmission MCQ PDF with answers to solve MCQ test questions: Amplitude modulation, analog to analog conversion, bipolar scheme, block coding, data bandwidth, digital to analog conversion, digital to digital conversion, HDB3, line coding schemes, multiline transmission, polar schemes, pulse code modulation, return to zero, scrambling, synchronous transmission, transmission modes. Practice Domain Name System MCQ PDF with answers to solve MCQ test questions: DNS, DNS encapsulation, DNS messages, DNS resolution, domain name space, domain names, domains, distribution of name space, and registrars. Practice Error Detection and Correction MCQ PDF with answers to solve MCQ test questions: Error detection, block coding, cyclic codes, internet checksum, linear block codes, network protocols, parity check code, and single bit error. Practice Multimedia MCQ PDF with answers to solve MCQ test questions: Analysis of algorithms, audio and video compression, data packets, moving picture experts group, streaming live audio video, real time interactive audio video, real time transport protocol, SNMP protocol, and voice over IP. Practice Multiple Access MCQ PDF with answers to solve MCQ test questions: Multiple access protocol, frequency division multiple access, code division multiple access, channelization, controlled access, CSMA method, CSMA/CD, data link layer, GSM and CDMA, physical layer, random access, sequence generation, and wireless communication. Practice Network Layer: Address Mapping, Error Reporting and Multicasting MCQ PDF with answers to solve MCQ test questions: Address mapping, class IP addressing, classful addressing, classless addressing, address resolution protocol, destination address, DHCP, extension headers, flooding, ICMP, ICMP protocol, ICMPV6, IGMP protocol, internet protocol IPV4, intra and interdomain routing, IPV4 addresses, IPV6 and IPV4 address space, multicast routing protocols, network router, network security, PIM software, ping program, routing table, standard Ethernet, subnetting, tunneling, and what is internet. Practice network layer: delivery, forwarding, and routing MCQ PDF with answers to solve MCQ test questions: Delivery, forwarding, and routing, networking layer forwarding, analysis of algorithms, multicast routing protocols, networking layer delivery, and unicast routing protocols. Practice Network Layer: Internet Protocol MCQ PDF with answers to solve MCQ test questions: Internet working, IPV4 connectivity, IPV6 test, and network router. Practice Network Layer: Logical Addressing MCQ PDF with answers to solve MCQ test questions: IPV4 addresses, IPV6 addresses, unicast addresses, IPV4 address space, and network router. Practice Network management: SNMP MCQ PDF with answers to solve MCQ test questions: Network management system, SNMP protocol, simple network management protocol, configuration management, data packets, and Ethernet standards. Practice Network Models MCQ PDF with answers to solve MCQ test questions: Network address, bit rate, flow and error control, layered tasks, open systems interconnection model, OSI model layers, peer to peer process, physical layer, port addresses, TCP/IP protocol, TCP/IP suite, and transport layer. Practice Network Security MCQ PDF with answers to solve MCQ test questions: Message authentication, message confidentiality, message integrity, analysis of algorithms, and SNMP protocol. Practice Process to Process Delivery:

UDP, TCP and SCTP MCQ PDF with answers to solve MCQ test questions: Process to process delivery, UDP datagram, stream control transmission protocol (SCTP), transmission control protocol (TCP), transport layer, and user datagram protocol. Practice Remote Logging, Electronic Mail and File Transfer MCQ PDF with answers to solve MCQ test questions: Remote logging, electronic mail, file transfer protocol, domains, telnet, and what is internet. Practice Security in Internet: IPsec, SSL/TLS, PGP, VPN and firewalls MCQ PDF with answers to solve MCQ test questions: Network security, firewall, and computer networks. Practice SONET MCQ PDF with answers to solve MCQ test questions: SONET architecture, SONET frames, SONET network, multiplexers, STS multiplexing, and virtual tributaries. Practice Switching MCQ PDF with answers to solve MCQ test questions: Switching in networks, circuit switched networks, datagram networks, IPV6 and IPV4 address space, routing table, switch structure, and virtual circuit networks. Practice Transmission Media MCQ PDF with answers to solve MCQ test questions: Transmission media, guided transmission media, unguided media: wireless, unguided transmission, computer networks, infrared, standard Ethernet, twisted pair cable, and wireless networks. Practice Virtual Circuit Networks: Frame Relay and ATM MCQ PDF with answers to solve MCQ test questions: virtual circuit networks, frame relay and ATM, frame relay in VCN, ATM LANs, ATM technology, LAN network, length indicator, and local area network emulation. Practice Wired LANs: Ethernet MCQ PDF with answers to solve MCQ test questions: Ethernet standards, fast Ethernet, gigabit Ethernet, standard Ethernet, data link layer, IEEE standards, and media access control. Practice Wireless LANs MCQ PDF with answers to solve MCQ test questions: Wireless networks, Bluetooth LAN, LANs architecture, baseband layer, Bluetooth devices, Bluetooth frame, Bluetooth Piconet, Bluetooth technology, direct sequence spread spectrum, distributed coordination function, IEEE 802.11 frames, IEEE 802.11 standards, media access control, network protocols, OFDM, physical layer, point coordination function, what is Bluetooth, wireless Bluetooth. Practice Wireless WANs: Cellular Telephone and Satellite Networks MCQ PDF with answers to solve MCQ test questions: Satellite networks, satellites, cellular telephone and satellite networks, GSM and CDMA, GSM network, AMPS, cellular networks, cellular telephony, communication technology, configuration management, data communication and networking, frequency reuse principle, global positioning system, information technology, interim standard 95 (IS-95), LEO satellite, low earth orbit, mobile communication, mobile switching center, telecommunication network, and wireless communication. Practice WWW and HTTP MCQ PDF with answers to solve MCQ test questions: World wide web architecture, http and html, hypertext transfer protocol, web documents, and what is internet.

This book is designed and developed assuming little or no technical background on part of the reader. The book therefore first introduces the philosophy of data communications covering signal propagation and information encoding. It then proceeds to cover various technologies, OSI model, protocols, network architectures, internetworking concepts and TCP/IP. All this makes the book ideally suited for the first course on Data Communications and Networks.

Excerpt from Criteria for the Performance Evaluation of Data Communications Services for Computer Networks These terms are all defined and their significance discussed. The effects of these factors on data communication networks are illustrated. Key words: Computer communications; computer networking; data communications; networks; performance requirements; telecommunications. About the Publisher Forgotten Books publishes hundreds of thousands of rare and classic books. Find more at www.forgottenbooks.com This book is a reproduction of an important historical work. Forgotten Books uses state-of-the-art technology to digitally reconstruct the work, preserving the original format whilst repairing imperfections present in the aged copy. In rare cases, an imperfection in the original, such as a blemish or missing page, may be replicated in our edition. We do, however, repair the vast majority of imperfections successfully; any imperfections that remain are intentionally left to preserve the state of such historical works.

Data Communication And Computer Networks Deals With Various Aspects Of The Subject Vis-À-Vis The Emerging Trends In Network-Centric Information Technology. It Provides The Reader With An In-Depth Framework Of The Fundamental Concepts. Networking Involves

Business Data Communications and Networking, 14th Edition presents a classroom-tested approach to the subject, combining foundational concepts, practical exercises, and real-world case studies. The text provides a balanced, well-rounded presentation of data communications while highlighting its importance to nearly every aspect of modern business. This fully-updated new edition helps students understand how networks work and what is required to build and manage scalable, mobile, and secure networks. Clear, student-friendly chapters introduce, explain, and summarize fundamental concepts and applications such as server architecture, network and transport layers, network design processes and tools, wired and wireless networking, and network security and management. An array of pedagogical features teaches students how to select the appropriate technologies necessary to build and manage networks that meet organizational needs, maximize competitive advantage, and protect networks and data from cybersecurity threats. Discussions of real-world management and technical issues, from improving device performance to assessing and controlling costs, provide students with insight into the daily networking operations of actual businesses.

What every electrical engineering student and technical professional needs to know about data exchange across networks While most electrical engineering students learn how the individual components that make up data communication technologies work, they rarely learn how the parts work together in complete data communication networks. In part, this is due to the fact that until now there have been no texts on data communication networking written for undergraduate electrical engineering students. Based on the author's years of classroom experience, Fundamentals of Data Communication Networks fills that gap in the pedagogical literature, providing readers with a much-needed overview of all relevant aspects of data communication networking, addressed from the perspective of the various technologies involved. The demand for information exchange in networks continues to grow at a staggering rate, and that demand will continue to mount exponentially as the number of interconnected IoT-enabled devices grows to an expected twenty-six billion by the year 2020. Never has it been more urgent for engineering students to understand the fundamental science and technology behind data communication, and this book, the first of its kind, gives them that understanding. To achieve this goal, the book: Combines signal theory, data protocols, and wireless networking concepts into one text Explores the full range of issues that affect common processes such as media downloads and online games Addresses services for the network layer, the transport layer, and the application layer Investigates multiple access schemes and local area networks with coverage of services for the physical layer and the data link layer Describes mobile communication networks and critical issues in network security Includes problem sets in each chapter to test and fine-tune readers' understanding Fundamentals of Data Communication Networks is a must-read for advanced undergraduates and graduate students in electrical and computer engineering. It is also a valuable working resource for researchers, electrical engineers, and technical professionals.

Fully revised and updated, the fourth edition includes new chapters on broadband multi-service networks, a revamped chapter with extended and updated coverage of FDDI, and a new section on Fast Ethernet, covering 100BaseT, 100Base X, wireless LANs, and several additional candidate technologies.

The book features research papers presented at the International Conference on Computer Networks and Inventive Communication Technologies (ICCNCT 2018), offering significant contributions from researchers and practitioners in academia and industry. The topics covered include computer networks, network protocols and wireless networks, data communication technologies, and network security. Covering the main core and specialized issues in the areas of next-generation wireless network design, control, and management, as well as in the areas of protection, assurance, and trust in information security practices, these proceedings are a valuable resource, for researchers, instructors, students, scientists, engineers, managers, and industry practitioners.

Appropriate for introductory computer networking courses at both the undergraduate and graduate level in Computer Science, Electrical Engineering, CIS, MIS, and Business Departments. Written by a best-selling author and leading computer networking authority, *Computer Networks and Internets, Third Edition* builds a comprehensive picture of the technologies behind Internet applications. Ideal for those with little or no background in the subject, the text answers the basic question "how do computer networks and Internets operate?" in the broadest sense and now includes an early optional introduction to network programming and applications. The text provides a comprehensive, self-contained tour through all of networking from the lowest levels of data transmission and wiring to the highest levels of application software, explaining how underlying technologies provide services and how Internet applications use those services. At each level, it shows how the facilities and services provided by lower levels are used and extended in the next level. For instructors who want to emphasize Internet technologies and applications, the book provides substantial sections on Internetworking and Network Applications that can serve as a focus for a course. An accompanying multimedia CD-ROM and Website provide opportunities for a variety of hands-on experiences.

Data and Computer Communications, Eighth Edition offers a clear, comprehensive, and unified view of the entire fields of data communications, networking, and protocols. William Stallings organizes this massive subject into small, comprehensible elements, building a complete survey of the state-of-the-art, one piece at a time. Stallings has substantially revised this international best-seller to reflect today's latest innovations, from WiFi and 10 Gbps Ethernet to advanced congestion control and IP performance metrics.

Annotation As one of the fastest growing technologies in our culture today, data communications and networking presents a unique challenge for instructors. As both the number and types of students are increasing, it is essential to have a textbook that provides coverage of the latest advances, while presenting the material in a way that is accessible to students with little or no background in the field. Using a bottom-up approach, *Data Communications and Networking* presents this highly technical subject matter without relying on complex formulas by using a strong pedagogical approach supported by more than 700 figures. Now in its Fourth Edition, this textbook brings the beginning student right to the forefront of the latest advances in the field, while presenting the fundamentals in a clear, straightforward manner. Students will find better coverage, improved figures and better explanations on cutting-edge material. The "bottom-up" approach allows instructors to cover the material in one course, rather than having separate courses on data communications and networking.

This book is a collection of peer-reviewed best selected research papers presented at 3rd International Conference on Computer Networks and Inventive Communication Technologies (ICCNCT 2020). The book covers new results in theory, methodology, and applications of computer networks and data communications. It includes original papers on computer networks, network protocols and wireless networks, data communication technologies, and network security. The proceedings of this conference is a valuable resource, dealing with both the important core and the specialized issues in the areas of next generation wireless network design, control, and management, as well as in the areas of protection, assurance, and trust in information security practice. It is a reference for researchers, instructors, students, scientists, engineers, managers, and industry practitioners for advance work in the area.

Introduction to Computer Networks H Data Transmission H Data encoding and communication technique H Multiplexing and Communication Hardware H Data Link Layer fundamentals H Data Link Layer Protocols H Contention-based Media Access Control Protocols H Polling-based Media Access Control Protocols H Media Access Control Protocols for High Speed Networks H Introduction to Layer Functionality H Routing Algorithms H Congestion Control Algorithms * Internetworking H Internet Protocol (IP) * Transport Services and Mechanism * TCP and UDP * Application Layer * ATM Networks * ISDN * Wireless Lan Technology * Setting up Hardware Components of Networking * Solved Questions DOEACC, A/B Level * Conceptual Problems & Solutions * Bibliography * Index

This complete introduction to data communications is written to bring a fresh, readable, business-oriented perspective to the technology that lies at the heart of the telecommunications revolution. Features more end-of-chapter exercises and new coverage of Bluetooth, V.92, and wireless technologies.

This fully revised and updated book, now in its Fourth Edition, continues to provide a comprehensive coverage of data communications and computer networks in an easy to understand style. The text places as much emphasis on the application of the concepts as on the concepts themselves. While the theoretical part is intended to offer a solid foundation of the basics so as to equip the student for further study, the stress on the applications is meant to acquaint the student with the realistic status of data communications and computer networks as of now. Audience Intended primarily as a textbook for the students of computer science and engineering, electronics and communication engineering, master of computer applications (MCA), and those offering IT courses, this book would also be useful for practising professionals. **NEW TO THIS EDITION** • Three new chapters on: o Network Architecture and OSI Model o Wireless Communication Technologies o Web Security • Appendix on Binary and Hexadecimal Numbering Key features • Illustrates the application of the principles through highly simplified block diagrams. • Contains a comprehensive glossary which gives simple and accurate descriptions of various terms. • Provides Questions and Answers at the end of the book which facilitate quick revision of the concept.

Two-time winner of the best Computer Science and Engineering textbook of the year award from the Textbook and Academic Authors Association For a one/two-semester courses in Computer Networks, Data Communications, and Communications Networks in CS, CIS, and Electrical Engineering departments. With a focus on the most current technology and a convenient modular format, this best-selling text offers a clear and comprehensive survey of the entire data and computer communications field. Emphasizing both the fundamental principles as well as the critical role of performance in driving protocol and network design, it explores in detail all the critical technical areas in data

communications, wide-area networking, local area networking, and protocol design.

Introduction, datacommunications, information theory, introduction to local area networks. Internet protocols ...

Primarily intended as a text for undergraduate courses in Electronics and Communications Engineering, Computer Science, IT courses, and Computer Applications, this up-to-date and accessible text gives an indepth analysis of data communications and computer networks in an easy-to-read style. Though a new title, it is a completely revised and fully updated version of the author's earlier book Data Communications. The rapid strides made during the last decade in the fields of data communication and networking, and the close link between these two subjects have prompted the author to add several chapters on computer networks in this text. The book gives a masterly analysis of topics ranging from the principles of data transmission to computer networking applications. It also provides standard protocols, thereby enabling to bridge the gap between theory and practice. What's more, it correlates the network protocols to the concepts, which are explained with the help of numerous examples to facilitate students' understanding of the subject. This well-organized text presents the latest developments in the field and details current topics of interest such as Multicasting, MPLS, IPv6, Gigabit Ethernets, IPsec, SSL, Auto-negotiation, Wireless LANs, Network security, Differentiated services, and ADSL. Besides students, the practicing professionals would find the book to be a valuable resource.

The usage of data communications and computer networks are ever in creasing. It is one of the few technological areas which brings benefits to most of the countries and the peoples of the world. Without it many industries could not exist. It is the objective of this book to discuss data communications in a readable form that students and professionals all over the world can understand. As much as possible the text uses dia grams to illustrate key points. Most currently available data communications books take their view point from either a computer scientists top-down approach or from an electronic engineers bottom-up approach. This book takes a practical ap proach and supports it with a theoretical background to create a textbook which can be used by electronic engineers, computer engineers, computer scientists and industry professionals. It discusses most of the current and future key data communications technologies, including: • Data Communications Standards and Models; • Local Area Networks (Ethernet, Token Ring and FDDI); • Transmission Control ProtocollInternet Protocol (TCPIIP); • High-level Data Link Control (HDLC); • X.25 Packet-switching; • Asynchronous Communications (RS-232) and Modems; • Pulse Coded Modulation (PCM); • Integrated Digital Services Network (ISDN); • Asynchronous Transfer Mode (ATM); • Error Control; • X-Windows. The chapters are ordered in a possible structure for the presentation of the material and have not been sectioned into data communications areas. Computer Networks is designed as a textbook for undergraduate students of computer science engineering as well as students pursuing courses MCA and IT. The book covers the fundamentals of Computer Networks and provides the tools that will help in simplifying the concepts and protocols for the students. Beginning with network fundamentals such as types of networks, network components etc, and an overview of data communications, the books moves on to provide a layer approach to building a computer network. Exhaustive description of the physical layer, data link layer, medium access sub layer, transport layer, and application layer is provided. The book also provides separate coverage of security issues. Key concepts of OSI model, its layers and their applications, TCP/IP, UDP, fiber optic communication, IEEE 802 wireless standard, various network protocols, and other advanced concepts are covered in detail. Using a simple approach with plenty of interesting analogies, the book provides a rich mix of examples and exercises to help students assimilate the theory.

Data communications and computer networks are vital in today's business world. Whether your career entails business management, computer programming, system design, or a related area, FUNDAMENTALS OF NETWORKING AND DATA COMMUNICATIONS, 7E, International Edition will give you the thorough understanding you need of basic features, operations, and limitations of different types of computer networks. The Seventh Edition retains many of the elements that made past editions so popular, including readability, coverage of the most current technologies, and a balanced presentation of both technical and practical everyday aspects of data communications. This book offers full coverage of wireless technologies, industry convergence, compression techniques, network security, LAN technologies, VoIP, and error detection and correction.

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