

Cryptography and Network Security, 1/e

Mohammad Amjad



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**CRYPTOGRAPHY
AND
NETWORK SECURITY**

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About the Book

Network security is a set of protocols that allow us to use the Internet comfortably without worrying about security attacks. The most common tool for providing network security is cryptography. This book first introduces the reader to the principles of cryptography and network security and then applies those principles to describe network security protocols both in physical as well as the wireless networks. Divided into 15 chapters, the book contains all the important aspects of network security and cryptography

Salient Features

- ▶ Multiple choice questions based on in depth knowledge of various methods used in network security.
- ▶ Detailed coverage of Codes and Encipherment Techniques, Symmetric key and Asymmetric key cryptography, Substitution Cipher, Monoalphabetic and polyalphabetic Ciphering.
- ▶ Detail discussion about Goals of Network security, types of attacks on network security and security mechanism.
- ▶ Provides sufficient number of examples in every chapter.
- ▶ Covers the latest topic of securing the low sized memory device like smart cards.
- ▶ One full chapter dedicated to wireless network security.
- ▶ Emphasis laid on Mathematics used in cryptography and network security.
- ▶ Exhaustive methods of steganography including audio and video steganography.
- ▶ Thorough discussion about Block ciphering and stream ciphering methods including DES, Feistel structure and AES.
- ▶ Coverage of modern Symmetric key Encipherment Techniques such as International Data Encryption Algorithm, RC4, RC5, RC6 and Blowfish.
- ▶ In depth Coverage of Digital signature, Message Authentication codes and key distribution systems.
- ▶ Detailed discussion about Message Digest algorithm, Kerberos, and X.509 Authentication Service.
- ▶ Comprehensively discusses system security, SSL, TLS, IDS and Firewalls

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About the Author

Mohammad Amjad :- Mohammad Amjad is Assistant Professor, Department of Computer Engineering, Jamia Millia Islamia, New Delhi. He has

four years of industry experience and 13 years of teaching experience. He has contributed twenty-five research papers in various reputed journals, national and international and at conferences in India and abroad like USA and China. He is actively involved in research and development activities in areas of MANET, WSN, Mobile Computing and Network.