

UNIT - 5

SECURITY: Introduction, Overview of security technique cryptographic algorithms, Digital signature, Cryptography pragmatics.

UNIT - 6

TIME & GLOBAL STATES: Introduction, Clocks, Events, Process states, Synchronizing physical clocks, Global states, Distributed debugging.

UNIT - 7

COORDINATION AND AGREEMENT: Distributed mutual exclusion, Elections, Multicast communication.

UNIT - 8

CORBA CASE STUDY: Introduction, CORBA RMI, CORBA Services.

TEXT BOOK:

1. "Distributed Systems, Concepts & Design", George Coulouris, Jean Dollimore, Tim Kindberg, fourth edition, 2006. Pearson education.

REFERENCE BOOK:

1. "Distributed System Architecture, a Middleware Approach" Arno puder, Kay Romer, Frank Pilhofer, Morgan Kaufmann publishers.

NETWORK SECURITY

Subject Code	: 10EC832	IA Marks	: 25
No. of Lecture Hrs/Week	: 04	Exam Hours	: 03
Total no. of Lecture Hrs.	: 52	Exam Marks	: 100

UNIT - 1

Services, mechanisms and attacks, The OSI security architecture, A model for network security.

UNIT - 2

SYMMETRIC CIPHERS: Symmetric Cipher Model, Substitution Techniques, Transposition Techniques, Simplified DES, Data encryption standard (DES), The strength of DES, Differential and Linear Cryptanalysis, Block Cipher Design Principles and Modes of Operation, Evaluation Criteria for Advanced Encryption Standard, The AES Cipher.

UNIT - 3

Principles of Public-Key Cryptasystems, The RSA algorithm, Key Management, Diffie - Hellman Key Exchange, Elliptic Curve Arithmetic, Authentication functions, Hash Functions.

UNIT - 4

Digital signatures, Authentication Protocols, Digital Signature Standard.

UNIT - 5

Web Security Consideration, Security socket layer (SSL) and Transport layer security, Secure Electronic Transaction.

UNIT - 6

Intruders, Intrusion Detection, Password Management.

UNIT - 7

MALICIOUS SOFTWARE: Viruses and Related Threats, Virus Countermeasures.

UNIT - 8

Firewalls Design Principles, Trusted Systems.

TEXT BOOK:

1. **Cryptography and Network Security**, William Stalling, Pearson Education, 2003.

REFERENCE BOOKS:

1. **Cryptography and Network Security**, Behrouz A. Forouzan, TMH, 2007.
2. **Cryptography and Network Security**, Atul Kahate, TMH, 2003.

OPTICAL NETWORKS

Subject Code

: 10EC833

IA Marks

: 25