

(Chapters 1, 2, 3 except 3.8, 5, 6.1 to 6.5, 7.1, 8, 9.1, 9.2 except SQLJ, 9.4, 10)

2. Raghu Ramakrishnan and Johannes Gehrke: Database Management Systems, 3rd Edition, McGraw-Hill, 2003, (Chapters 16, 17.1, 17.2, 18)

Reference Books:

1. Silberschatz, Korth and Sudharshan: Data base System Concepts, 6th Edition, Mc-GrawHill, 2010.
2. C.J. Date, A. Kannan, S. Swamynatham: An Introduction to Database Systems, 8th Edition, Pearson Education, 2006.

COMPUTER NETWORKS - I

Subject Code: 10CS55
Hours/Week : 04
Total Hours : 52

L.A. Marks : 25
Exam Hours: 03
Exam Marks: 100

PART - A

UNIT - 1

7 Hours

Introduction: Data Communications, Networks, The Internet, Protocols & Standards, Layered Tasks,
The OSI model, Layers in OSI model, TCP/IP Protocol suite, Addressing

UNIT- 2

7 Hours

Physical Layer-1: Analog & Digital Signals, Transmission Impairment, Data Rate limits, Performance, Digital-digital conversion (Only Line coding: Polar, Bipolar and Manchester coding), Analog-to-digital conversion (only PCM), Transmission Modes, Digital-to-analog conversion

UNIT- 3

6 Hours

Physical Layer-2 and Switching: Multiplexing, Spread Spectrum, Introduction to switching, Circuit Switched Networks, Datagram Networks, Virtual Circuit Networks

UNIT- 4

6 Hours

Data Link Layer-1: Error Detection & Correction: Introduction, Block coding, Linear block codes, Cyclic codes, Checksum.

PART - B

39



H.O.D.

Dept. Of Computer Science & Engineering
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225

UNIT- 5**6 Hours**

Data Link Layer-2: Framing, Flow and Error Control, Protocols, Noiseless Channels, Noisy channels, HDLC, PPP (Framing, Transition phases only)

UNIT- 6**7 Hours**

Multiple Access & Ethernet: Random access, Controlled Access, Channelization, Ethernet: IEEE standards, Standard Ethernet, Changes in the standard, Fast Ethernet, Gigabit Ethernet

UNIT - 7**6 Hours**

Wireless LANs and Cellular Networks: Introduction, IEEE 802.11, Bluetooth, Connecting devices, Cellular Telephony

UNIT - 8:**7 Hours**

Network Layer: Introduction, Logical addressing, IPv4 addresses, IPv6 addresses, Internetworking basics, IPv4, IPv6, Comparison of IPv4 and IPv6 Headers.

Text Books:

1. Behrouz A. Forouzan,; Data Communication and Networking, 4th Edition Tata McGraw-Hill, 2006.
(Chapters 1.1 to 1.4, 2.1 to 2.5, 3.1 To 3.6, 4.1 to 4.3, 5.1, 6.1, 6.2, 8.1 to 8.3, 10.1 to 10.5, 11.1 to 11.7, 12.1 to 12.3, 13.1 to 13.5, 14.1, 14.2, 15.1, 16.1, 19.1, 19.2, 20.1 to 20.3)

Reference Books:

1. Alberto Leon-Garcia and Indra Widjaja: Communication Networks - Fundamental Concepts and Key architectures, 2nd Edition Tata McGraw-Hill, 2004.
2. William Stallings: Data and Computer Communication, 8th Edition, Pearson Education, 2007.
3. Larry L. Peterson and Bruce S. Davie: Computer Networks – A Systems Approach, 4th Edition, Elsevier, 2007.
4. Nader F. Mir: Computer and Communication Networks, Pearson Education, 2007.

**H.O.D.**

Dept. Of Computer Science & Engineering
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 228