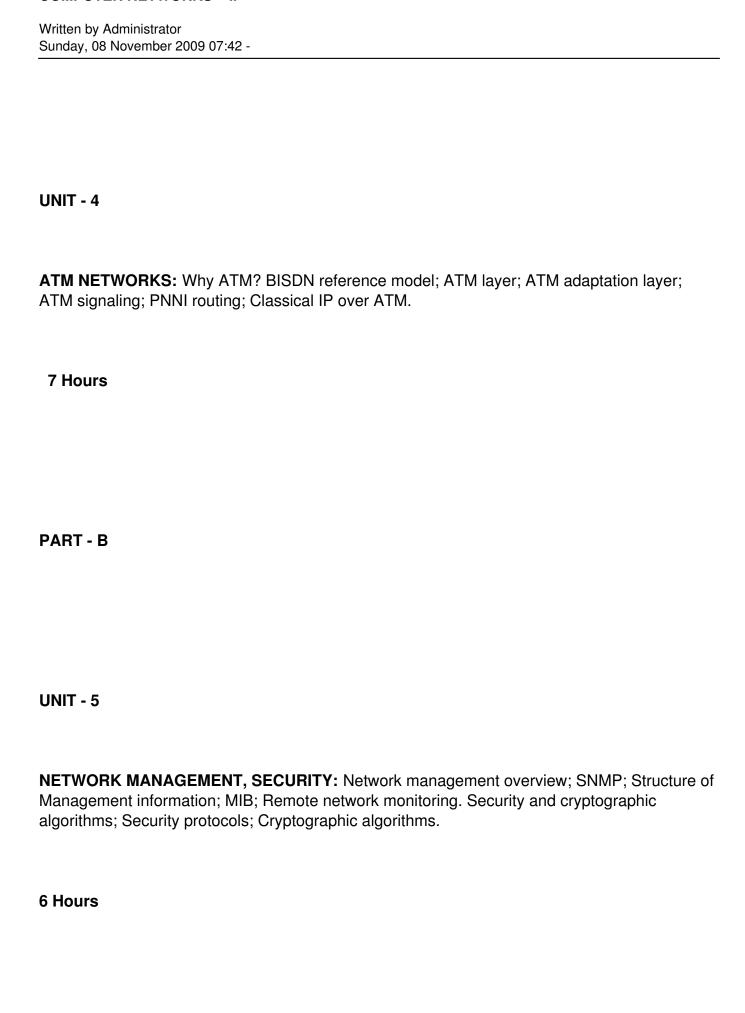
Written by Administrator Sunday, 08 November 2009 07:42 -
Subject Code
□ 06CS64/IS665□ □
IA Marks
25
No. of Lecture Hrs./ Week
04
Exam Hours

Written by Administrator Sunday, 08 November 2009 07:42 -
03
Total No. of Lecture Hrs.
52
Exam Marks
100
PART - A

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UNIT - 1
PACKET-SWITCHING NETWORKS – 1: Network services and internal network operations; Packet network topology; Datagrams and virtual circuits; Routing in packet networks; Shortest-path routing; ATM networks.
6 Hours
UNIT - 2
<b>PACKET-SWITCHING NETWORKS – 2, TCP / IP - 1:</b> Traffic management at the packet level Traffic management at the flow level; Traffic management at the flow-aggregate level. The TCF / IP architecture; The Internet protocol.
6 Hours
UNIT - 3
TCP / IP - 2: IPv6; User datagram protocol; Transmission control protocol; Internet routing protocols; Multicast routing; DHCP, NAT, and Mobile IP.
7 Hours 🛘



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**UNIT - 6** 

**QoS**, Resource Allocation, VPNs, Tunneling, Overlay Networks: Overview of QOS; Integrated services QoS; Differentiated services QoS; Resource allocation. Virtual Private Networks; Multiprotocol Label switching; Overlay networks.

7 Hours

**UNIT - 7** 

**COMPRESSION OF DIGITAL VOICE AND VIDEO, VOIP, MULTIMEDIA NETWORKING:** Ove rview of data compression; Digital voice and compression; Still images and JPEG compression; Moving images and MPEG compression; Limits of compression with loss; Compression methods without loss; Case Study: FAX compression for transmission.

Overview of IP telephony; VoIP signaling protocols; Real-Time media transport protocols; Distributed multimedia networking; SCTP.

7 Hours

**UNIT - 8** 

**MOBILE AD-HOC NETWORKS, WIRELESS SENSOR NETWORKS:** Overview of wireless adhoc networks; Routing in adhoc networks; Routing protocols for adhoc networks; security of adhoc networks. Sensor networks and protocol structures; Communication energy model; Clustering protocols; Routing protocols; Zigbee technology and IEEE 802.15.4

Written by Administrator
Sunday, 08 November 2009 07:42 -

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## **TEXT BOOKS:**

Communication Networks – Fundamental Concepts and Key architectures – Alb
Leon-Garcia and Indra Widjaja:, 2

Edition, Tata McGraw-Hill, 2004.

2. Computer and Communication Networks – Nader F. Mir:, Pearson Education, 2007.

## **REFERENCE BOOKS:**

- 1. **Data** Communications and Networking Behrouz A. Forouzan 4<sup>th</sup> Edition, Tata McGraw-Hill, 2006.
- 2. **Data and Computer Communication** William Stallings 8<sup>th</sup> Edition, Pearson Education, 2007.
- 1. **Computer** Networks A Systems Approach Larry L. Peterson and Bruce S. David 4
  - 2. **Introduction to Data Communications and Networking** Wayne Tomasi Pearson Education, 2005.

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