Required Learning Outcomes

Explore the Network
    1.   Globally Connected Data
    2.   LANs, WANs
    3.   The Network as a Platform
    4.   Distributed Processing
    5.   Network Criteria
    6.   Physical Structures
    7.   Network Models
    8.   Categories of Networks
    9.   The Changing Network Environment

THE INTERNET
    1.   A Brief History
    2.   The Internet Today
PROTOCOLS AND STANDARDS
3.   Protocols
4.   Standards
5.   Standards Organizations
      6.   Internet Standards

LAYERED TASKS
    1.   Sender, Receiver, and Carrier
    2.   Hierarchy
    3.   THE OSI MODEL
    4.   Layered Architecture
    5.   Peer-to-Peer Processes
    6.   Encapsulation

LAYERS IN THE OSI MODEL
    1.   Physical Layer
    2.   Data Link Layer
    3.   Network Layer
    4.   Transport Layer
    5.   Session Layer
    6.   Presentation Layer
    7.   Application Layer
    8.   Summary of Layers

TCP/IP PROTOCOL SUITE Physical and Data Link Layers .1 Network Layer .2 Transport Layer.3 Application Layer .4 ADDRESSING Physical Addresses .1 Logical Addresses .2 Port Addresses .3 Specific Addresses .4

GUIDED MEDIA
    1. Twisted-Pair Cable
    2. Coaxial Cable
    Fiber-Optic Cable
UNGUIDED MEDIA: WIRELESS
    1. Radio Waves
    2.Microwaves
    3. Infrared

CIRCUIT-SWITCHED NETWORKS 1. Three Phases 2. Efficiency 3. Delay 4. Circuit-Switched Technology in Telephone Networks DATAGRAM NETWORKS 1. Routing Table 2.Efficiency 3. Delay 4. Datagram Networks in the Internet
VIRTUAL-CIRCUIT NETWORKS 1. Addressing 2. Three Phases 3. Efficiency 3. Delay in Virtual-Circuit Networks