

Fundamental of Networking and Web Technology

DIT- 04

Unit 1: Basics of Computer Network

Computer Network Definition, Goals, Broadcast and Point-to-Point Network, Connectionless and Connection-Oriented Services; Network Devices, Network Topologies; Types of Network: LAN, MAN, WAN; Server Based LANs and Peer-to-Peer LANs; Transmission Types; Modes of Communication, Switching Techniques.

Unit 2: Network Models

Design issues of the Layers, Protocol Hierarchy, ISO-OSI Reference Model: Functions of each Layers; Various Terminology used in Computer Network; Connection-Oriented and Connectionless services, Internet (TCP/IP) Reference Model, Comparison of ISO-OSI and TCP/IP Model.

Unit 3: Transmission Media

Transmission Medium, Guided Media: Coaxial Cable, Twisted Pair, Fiber Optics Cable; Unguided Media: Radio Waves, Infrared, Micro-wave, and Satellite.

Unit 4: Internet Basics

Internet Architecture, Accessing, Internet Service Provider(ISP), Organization of Internet Protocol Suite, IP Address, DNS, URL; World Wide Web(WWW): Web Page, Web Servers, Web Browsers, Cookies.

Unit 5: Static Web Page Design

Basics of HTML, Document Structure tags, Formatting tags; List tags; Hyperlink and Image tags; Table tags; Frame tags; Form tags.

Unit 6: HTML Tags and XML

HTML Form; Additional Advanced HTML Tags; Introduction of XML.

Unit 7: JavaScript

Client Side Programming; Basic Programming Concepts; Control Structures in JavaScript; Array; Working with Form Object; Built-in Objects in JavaScript, User Defined Objects in JavaScript.

Suggested Readings:

- 1- A. S Tanenbaum, "Computer Networks, 3rd Edition", PHI
- 2- W. Stallings, "Data and Computer Communication", Macmillan Press
- 3- Comer, "Computer Networks & Internet", PHI