Gujarat University

B.COM – III

Course Code: CE 301 D

Subject: Computer Application

Paper Title: Computer Networks

Objectives:

- To introduce the basics of Computer Networks
- To understand the components of Network.

Contents:

Unit – I   Basics of Communication Networks:
Communication Networks – Channels and Circuits – Signals, Transmission, Speed and Rate – Interactive – Non Interactive Systems

Unit –II   Introduction to Computer Networks:
Need – Advantages – Uses of Computer Network – Network Models categories (LAN, MAN, WAN and VWAN – Definition and Advantages) – Topology (BUS, RING, STAR and TREE (Definition, Advantages and Disadvantages)

Unit – III   Network Concepts:
Network Concept – Wireless Networks, Services, Protocols (Definition and functions) – Network Components NIC, Routers, Bridges, Switches, Hubs and Repeaters (Definition and functions)

Unit – IV   Network Tools:
Introduction to Security – SNMP – DNS – E-mail – HTTP – HTML (Concept and its uses)

Main Reference Book(s):
 (i) S.S. Shinde "Computer Network" New Age International Publisher

Suggested Additional Reading Book(s):
 (i) Ed Tittel "Computer Networking", Tata McGraw Hill

Chapter-wise coverage from main reference book:
Chapters: 1, 4, 5, 12 (12.1, 12, 7, 12, 8, 12.9, 12.10)

Accomplishments of the Student after completing the Course:

After completion of this course Student would be able to
- Understand the basics of Network Communication and Computer Networks.
- Understand and use Network Devices
- To be able to use Network Tools.

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List of Practicals (Sample Guide line):

1. Demonstration of network devices (Router, Switch, Server, RJ 45 connector, Hub, NIC etc and explaining its functions.

2. Use of following network commands (i) ping (ii) ipconfig (iii) pathping (iv) tracert / traceroot (v) netstate (vi) nslookup (vii) route (viii) arp (ix) Hostname (x) winpcfg

3. Connect the server and node with a network wire with RJ 45 connector and establish a network connectivity with ' ping' command and its option like ping – t

4. Create and manage the user profile

5. How to share of file, folder printer and other peripherals etc.

6. Configuration of TCP/IP network by applying IP number, subnet mask.

7. Use of 'Team viewer' and download, upload a file.

8. Use of 'Ammey' to capture the remote screen and use it to download or configure a system

9. Use of 'VNC / Ultra VNC' to see the file of remote computer.