CA9121 COMPUTER COMMUNICATIONS AND NETWORKS

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UNIT I INTRODUCTION 12

Communication model – Data communications networking – Data transmission concepts and terminology – Transmission media – Data encoding – Data link control.

UNIT II NETWORK FUNDAMENTALS 12

Protocol architecture – OSI – TCP/IP – LAN architecture – Topologies – MAC – Ethernet, Fast ethernet, Token ring, FDDI, Wireless LANS – Bridges.

UNIT III NETWORK LAYER 12

Network layer functions – Switching concepts – Circuit switching networks – Packet switching – Routing – Internetworking concepts – IP – Unreliable connectionless delivery – Datagrams – Routing IP datagrams – ICMP.

UNIT IV TRANSPORT LAYER 12

Transport layer functions – User Datagram Protocol – Transmission Control Protocol – Reliable Delivery Service – Connection Establishment – Flow Control – Congestion Control – Queueing disciplines – Congestion Avoidance.

UNIT V APPLICATIONS 12

Domain Name System(DNS) – Telnet – rlogin – FTP – SMTP – MIME – IMAP – HTTP – SNMP – Security.

TOTAL = 60

REFERENCES

1. Larry L. Peterson & Bruce S. Davie, “Computer Networks: A Systems Approach”, Fourth Edition, Morgan Kaufmann Publishers, 2007.

2. William Stallings, “Data and Computer Communications”, Seventh Edition, PHI, 2004.

3. James F. Kurose, Keith W. Ross, “Computer Networking: A Top-Down Approach”, Fourth Edition, Addison-Wesley, 2008.