Branch: Computer Science & Engineering	Semester: Fourth
Subject: Data Communication & Networking	
UNIT-I	
SN	**Question**
1	Illustrate the topology and give brief the various types of topologies.
2	Define Data communication also its components in brief.
3	Define the network? Explain criteria that are necessary to make the network effective & efficient.
4	Illustrate the LAN, MAN & WAN with suitable example.
5	Summarize Transmission Media & describe its categories.
6	Summarize the TCP/IP protocol suit with all the layers from network model.
7	Interpret the Switching and describe Packet switching and Circuit switching. DIFFERENCIATE
8	Compare TCP/IP and OSI Layer.
9	For n devices in a network, what is the number of cable links required for a mesh, ring, bus, and star topology?
10	Explain the difference between an Internet draft and a proposed standard.
11	Name the advantages of optical fiber over twisted-pair and coaxial cable.
12	A light signal is travelling through a fiber. What is the delay in the signal if the length of the fiber-optic cable is 10 m, 100 m, and 1 Km (assume a propagation speed of 2 × 108 m)?
13	Describe the need for switching and define a switch.
14	What is the role of the address field in a packet traveling through a datagram network?
15	List four major components of a packet switch and their functions.
16	Compare and contrast the two major categories of circuit switches.
UNIT-II	
1	Illustrate Data link Layer and its sublayer in brief
2	Design the Stop-and-Wait protocol architecture and state its working stages.
3	Define Bit stuffing? Explain its example bit oriented protocol
4	A sender is sending a data as 100100 having divisor 1101 tabulate the CRC to send.
5	Explain bust error correction with suitable example? Illustrate purpose of hamming code
6	Elaborate the HDLC modes, HDLC frames in detail. configuration of HDLC HDLC stations
7	Identify the services provided by Data Link layer and explain in detail.
8	Design Go-Back-N ARQ protocol architecture
9	Distinguish between a point-to-point link and a broadcast link.
10	What are the different types of errors in data transmission?
11	What is Media Access Control (MAC)? Explain in brief Random-access protocols.
12	What is parity check? Explain the working of Encoder and Decoder for simple parity-check code.
13	A Receiver receives the codeword as 1000110 and divisor as 1011 find whether the data is changed during transmission or not?
14	What is Checksum? Describe the procedure to calculate checksum in traditional method.
15	What is chunk interleaving? How it is defferent than Hamming distance?
16	What is piggybacking? Explain in detail Point-To-Point Protocol (PPP)

17. CRC with example.
data divisor
1010011110 1011

18.codeword received =10011100101
using hamming code what is the code sent?

	UNIT-III
1	Distinguish between the process of routing a packet from the source to the destination and the process of forwarding a packet at each router.
2	In classless addressing, can two different blocks have the same prefix length? Explain.
3	Why does the network-layer protocol need to provide packetizing service to the transport layer?
4	In classless addressing, we know the first and the last address in the block.
5	List four types of delays in a packet-switched network
6	If a label in a connection-oriented service is 8 bits, how many virtual circuits can be established at the same time?
7	List the three phases in the virtual-circuit approach to switching.
8	In classless addressing, we know the first address and the number of addresses in the block. Can we find the prefix length? If the answer is yes, show the process.
9	If a label in a connection-oriented service is 8 bits, how many virtual circuits can be established at the same time?
10	Distinguish between the process of Packet Switching & Circuit Switching Network
11	Draw & Explain DHCP Message Formate
12	Expian in brief FSM for DHCP Client
13	Define IPV4 occupation of the address space in classfull addressing
14	Elaborate term Routing ,Forwarding and packetizing
15	List & Explain other services expected from Network layer
16	Define term of Network Address Translation
17	Each of following addresses belongs to block . Find the first and the last address in each block a. 14.12.72.8/24 b. 200.107.16.17/18
	UNIT-IV
1	Draw and Expiane in Brief IP Datagram Format
2	Explain IPv4 datagram Security issue applicable to the IP Protocol
3	Define two categories of ICMPv4 messages
4	Elaborate Uses of Dibugging Tools in ICMPv4
5	Draw and Explain home agent and foreign agent in Mobile IP
6	Define Communication with remoter host , a mobile host goes through in Three Phases for Mobile IP
7	Elaborate Inefficiency in Mobile IP
8	Which Protocol is the carrier of the agent advertisement and Solicitation message
9	Explain in Brief Distance-Vector Routing Algorithm
10	Explain in Brief Link-State Routing Algorithm
11	Explain IPv6 Addressing in brief
12	Compaire IPv4 & IPv6 Protocol
13	Elaborate Transition from IPV4 to IPV6
14	Draw & Explain Triangle Routing in Mobile IP
15	Explain Registration Reply Format
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	UNIT-V
1	Explain Transport Layer services
2	What s connection oriented and connectionless protocol
3	Explain Stop and wait protocol ARQ
4	Explain Go-Back-N Protocol
5	Explain Selective-Repeat Protocol sliding window.|flow control mechanism
6	What is piggybackung?Explain in detail
7	What is UDP? Explain its services
8	What are the various applications of UDP
9	What is TCP? Explain its services
10	Explain various features of TCP
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	UNIT-VI
1	What is client servr paradigm?describe in detail
2	Explain Application Programming Interface(API)
3	Explain flow diagram for iterative UDP communication
4	WHAT IS HTTP ? explain Non persistent and persistent protocol
5	What is proxy server? Explain in detail
6	What is FTP? explain types of connection
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9	Explain 1. POP3 2. IMAP 3. MIME
10	What is DNS? Explain its purpose
11	Explain Domain Name space
12	What is SNMP? Explain its management components
13	What is MIB? Explain its objects
14	What is ASN.1? Explain its symbol with its meaning
15	What is SMi? Explain in details
16	Explain Hierarchy of name srvers
17	Explain different type of domains

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