SRM VALLIAMMAI ENGINEERING COLLEGE

(An Autonomous Institution)

SRM Nagar, Kattankulathur – 603 203

DEPARTMENT OF ELECTRONICS AND INSTRUMENTATION ENGINEERING

QUESTION BANK

VI SEMESTER

1904003-COMPUTER NETWORKS

Regulation – 2019

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Prepared by

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SUBJECT: 1904003-COMPUTER NETWORKS
SEM / YEAR : VI Sem / III Year

UNIT I -INTRODUCTION AND PHYSICAL LAYER				
Networks – Network Types – TCP/IP Protocol suite – OSI Model – Physical Layer: Performance – Transmission media – Switching – Circuit-switched Networks – Packet Switching.				
PART – A				
Q.No	**Questions**	**BT Level**	**CO**	**Competence**
1.	List the different network criteria.	**BTL 1**	**CO1**	**Remember**
2.	Define Simplex, Half-Duplex and Full-Duplex.	**BTL 1**	**CO1**	**Remember**
3.	Examine the two types of line configuration.	**BTL 2**	**CO1**	**Understand**
4.	What is the purpose of dialog controller?	**BTL 1**	**CO1**	**Remember**
5.	Illustrate the fundamental characteristics of data communication.	**BTL 2**	**CO1**	**Understand**
6.	Analyze all the parameters used to measure network performance.	**BTL 2**	**CO1**	**Understand**
7.	Define computer Networks.	**BTL 1**	**CO1**	**Remember**
8.	List the five components of data communication.	**BTL 1**	**CO1**	**Remember**
9.	Interpret LAN, WAN and MAN.	**BTL 2**	**CO1**	**Understand**
10.	What is OSI? list the seven layers.	**BTL 2**	**CO1**	**Understand**
11.	What is the similarity between transport layer and data link layer?	**BTL 1**	**CO1**	**Remember**
12.	In what way you can summarize the purpose of layering.	**BTL 2**	**CO1**	**Understand**
13.	How do guided media differ from unguided media?	**BTL 2**	**CO1**	**Understand**
14.	Assume 6 devices are arranged in a mesh topology. How many cables are Needed? How many ports are needed for each device?	**BTL 2**	**CO1**	**Understand**
15.	Organize the diagrammatic view of exchange using OSI model.	**BTL 1**	**CO1**	**Remember**
16.	Why are protocols needed?	**BTL 1**	**CO1**	**Remember**
17.	What are the two approaches to packet switching?	**BTL 2**	**CO1**	**Understand**
18.	Compare and contrast the common approaches for switching.	**BTL 2**	**CO1**	**Understand**
19.	Name the factors that affect the reliability of the network?	**BTL 1**	**CO1**	**Remember**
20.	List out the advantages of star topology.	**BTL 2**	**CO1**	**Understand**
21.	Which layer implements the node to node channel connection in OSI layered architecture?	**BTL 1**	**CO1**	**Remember**
22.	What are the applications of Computer Networks?	**BTL 1**	**CO1**	**Remember**
23.	What is point-point link?	**BTL 2**	**CO1**	**Understand**
24.	What are the criteria used to evaluate transmission medium?	**BTL 2**	**CO1**	**Understand**
PART – B				
1.	(i). Explain how to build network with OSI and TCP/IP reference mode **(6)** (ii). Write short notes on: (a). Multiplexing and Demultiplexing **(4)** (b). Framing **(3)**	**BTL 3**	**CO1**	**Apply**
2.	Explain fiber optic communication in detail**.(13)**	**BTL 3**	**CO1**	**Apply**

3.	Distinguish between point to point links and multi point links. Give relevant diagrams. **(13)**	**BTL 4**	**CO1**	**Analyze**
4.	Briefly explain the different types of packet switching techniques with suitable networks. Write each of its advantages and disadvantages. **(13)**	**BTL 4**	**CO1**	**Analyze**
5.	Explain in detail about the comparison of packet switching and circuit switching. **(13)**	**BTL 3**	**CO1**	**Apply**
6.	(i)Explain the types of transmission modes. **(7)** (ii)What are the different types of networks? Explain in detail.**(6)**	**BTL 3**	**CO1**	**Apply**
7.	Explain the Shielded twisted pair (STP) and Unshielded twisted pair (UTP). **(13)**	**BTL 4**	**CO1**	**Analyze**
8.	Explain in detail about TCP/IP protocol suite with neat diagram**.(13)**	**BTL 3**	**CO1**	**Apply**
9.	Discuss in detail about Peer to peer processing with neat diagram**.(13)**	**BTL 4**	**CO1**	**Analyze**
10	Explain the various types of transmission media, highlighting their merits and demerits**.(13)**	**BTL 4**	**CO1**	**Analyze**
11.	Discuss in detail about the functions of network layer and transport layers with necessary diagrams. **(13)**	**BTL 4**	**CO1**	**Analyze**
12.	(i) Explain the various network performance parameters in detail. **(7)** (ii) Explain the purpose of cladding in an optical fiber. **(6)**	**BTL 3**	**CO1**	**Apply**
13.	What is network topology? Explain the different network topologies. **(13)**	**BTL 4**	**CO1**	**Analyze**
14.	(i) Differentiate between a service port addressing, logical addressing and physical addressing. **(6)** (ii) Name the services provided by application layer and explain**.(7)**	**BTL 3**	**CO1**	**Apply**
15.	(i)Analyze the advantages of optical fiber over twisted pair and coaxial cable. **(6)** (ii)Explain the major component of a packet switch and their functions. **(7)**	**BTL 4**	**CO1**	**Analyze**
16.	Explain the two approaches of packet switching and circuit switching techniques. **(13)**	**BTL 4**	**CO1**	**Analyze**
17.	(i) Explain in detail about network dependent and network independent layers of OSI reference model. **(7)** (ii) List out the approaches of switching. **(6)**	**BTL 4**	**CO1**	**Analyze**
	PART C			
1.	Briefly explain any two methods used for data communication using guided media and unguided media. **(15)**	**BTL 5**	**CO1**	**Evaluate**
2.	Interpret with relevant diagram the functions of physical and data link layer**.(15)**	**BTL 5**	**CO1**	**Evaluate**
3.	Discuss the different types of switching networks and mention its advantages and disadvantages. **(15)**	**BTL 5**	**CO1**	**Evaluate**
4.	Estimate on various classes of transmission medium. **(15)**	**BTL 6**	**CO1**	**Create**
5.	Interpret the major functions performed by the layers of the ISO – OSI model. **(15)**	**BTL 5**	**CO1**	**Evaluate**

UNIT II – DATA-LINK LAYER & MEDIA ACCESS				
Introduction – DLC Services – HDLC – PPP – Media Access Control – Wired LANs: Ethernet – Wireless LANs – IEEE 802.11, Bluetooth – Connecting Devices. Hubs, Switches- Routers				
PART – A				
Q.No	**Questions**	**BT Level**	**CO**	**Competence**
1.	What do you understand by CSMA protocol?	**BTL 1**	**CO2**	**Remember**
2.	What is CRC?	**BTL 1**	**CO2**	**Remember**
3.	Assess about Nodes and Links	**BTL 2**	**CO2**	**Understand**
4.	What is HDLC?	**BTL 1**	**CO2**	**Remember**
5.	Outline the services provided by the Data link layer	**BTL 2**	**CO2**	**Understand**
6.	What is flow control and error control	**BTL 2**	**CO2**	**Understand**

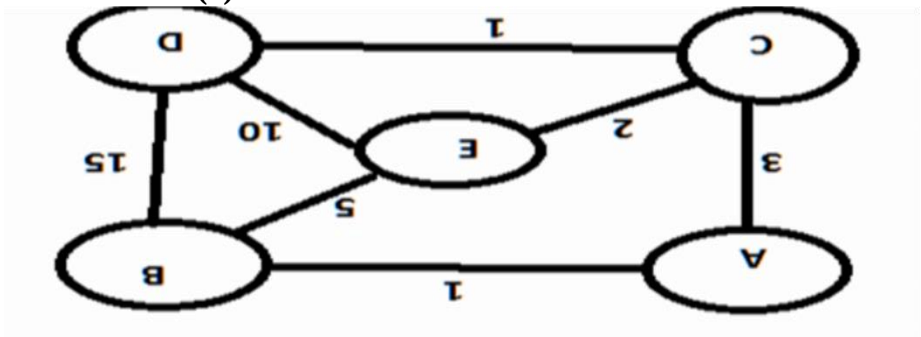
7.	Infer why the data link layer is subdivided into two sub layers.	**BTL 1**	**CO2**	**Remember**
8.	Show the types of errors.	**BTL 1**	**CO2**	**Remember**
9.	Suppose the following sequence of bits arrives over a link 1101011111010111110010111110110. Show the resulting frame after any stuffed bits have been removed .Indicates any errors that might have been introduced into the frame.	**BTL 2**	**CO2**	**Understand**
10.	What are the three different configuration supported by HDLC?	**BTL 2**	**CO2**	**Understand**
11.	Define framing.	**BTL 1**	**CO2**	**Remember**
12.	Relate persistent CSMA with non-persistent CSMA.	**BTL 2**	**CO2**	**Understand**
13.	Compose your view on why fragmentation is recommended in a wireless LAN?	**BTL 2**	**CO2**	**Understand**
14.	Examine exponential back off.	**BTL 2**	**CO2**	**Understand**
15.	Analyze the role of 802.11	**BTL 1**	**CO2**	**Remember**
16.	What is meant by bit stuffing? Give an example	**BTL 1**	**CO2**	**Remember**
17.	Assess the four types of S frames.	**BTL 2**	**CO2**	**Understand**
18.	Examine the access method used by wireless LAN?	**BTL 2**	**CO2**	**Understand**
19.	What is redundancy	**BTL 1**	**CO2**	**Remember**
20.	Interpret the different states of the bluetooth devices.	**BTL 2**	**CO2**	**Understand**
21.	Assess the role of error control.	**BTL 1**	**CO2**	**Remember**
22.	Show the Ethernet frame format.	**BTL 1**	**CO2**	**Remember**
23.	Give the usage of I, S, U frames.	**BTL 2**	**CO2**	**Understand**
24.	Write about the Hubs and switches.	**BTL 2**	**CO2**	**Understand**
	PART – B			
1.	Explain the CSMA/CD algorithms of Ethernet. **(13)**	**BTL 3**	**CO2**	**Apply**
2.	Construct the comparison between different wireless technologies? Enumerate 802.11 protocol stacks in detail.**(13)**	**BTL 4**	**CO2**	**Analyze**
3.	Analyze the architecture of IEEE 802.11.**(13)**	**BTL 4**	**CO2**	**Analyze**
4.	Illustrate the working of CSMA / CD and CSMA/CA protocol**.(13)**	**BTL 3**	**CO2**	**Apply**
5.	Illustrate and discuss the algorithm for sender site and receiver site stop and wait protocol. **(13)**	**BTL 3**	**CO2**	**Apply**
6.	Explain in detail about the Point to point Protocol (PPP) with neat sketch. **(13)**	**BTL 4**	**CO2**	**Analyze**

7.	(i) Analyze the flow and error control in DLC. **(7)** (ii) Examine the various issues in the Data link layer. **(6)**	**BTL 4**	**CO2**	**Analyze**
8.	Discuss about the evolution of Ethernet and explain the frame format. **(13)**	**BTL 4**	**CO2**	**Analyze**
9.	Explain Go-Back-N automatic repeat request design and algorithm**.(13)**	**BTL 4**	**CO2**	**Evaluate**
10.	(i). Summarize Cyclic Redundancy Check. Show an example of a CRC code. **(7)** (ii). Explain and solve CRC division using polynomials. **(6)**	**BTL 3**	**CO2**	**Apply**
11.	Describe in detail about sliding window protocol using Go back N. **(13)**	**BTL 4**	**CO2**	**Analyze**
12.	lllustrate about the following: i)Transition phase of PPP **(7)**	**BTL 3**	**CO2**	**Apply**

	ii)Multilink PPP **(6)**			
13	Write short notes on: (i) NAV in CSMA/CA **(7)** (ii) Flow control mechanism **(6)**	**BTL 3**	**CO2**	**Apply**
14	Explain the working principle of Switches, Hub and Routers. **(13)**	**BTL 4**	**CO2**	**Analyze**
15.	Show the working principle of Bluetooth and develop a neat sketch to depict architecture. **(13)**	**BTL 3**	**CO2**	**Apply**
16.	Classify in detail about High-level Data Link Control and the types of frames.**(13)**	**BTL 4**	**CO2**	**Analyze**
17	Illustrate about the following: (i) Simple and Two Dimensional Parity Check **(6)** (ii) Check Sum **(7)**	**BTL 3**	**CO2**	**Apply**
	PART C			
1.	Explain Cyclic Redundancy Check? Suppose we want to transmit the message 11001001 and protect it from errors using the CRC polynomial $x_3 + 1$. Use polynomial long division to determine the message that should be transmitted. **(15)**	**BTL 5**	**CO2**	Evaluate
2.	Interpret your understanding of bit oriented protocol namely HDLC. **(15)**	**BTL 5**	**CO2**	Evaluate
3.	Give the different standards of IEEE 802.3 with their major advantages and disadvantages. **(15)**	**BTL6**	**CO2**	Create
4.	Assume that, in a Stop-and-Wait ARQ system, the bandwidth of the line is 1 Mbps, and 1 bit takes 20 ms to make a round trip. What is the bandwidth-delay product? If the system data frames are 1000 bits in length, calculate the utilization % of the link? **(15)**	**BTL6**	**CO2**	Create
5.	Explain the hidden terminal and exposed terminal problems in wireless LAN and how MACA protocol handle these problems. **(15)**	**BTL5**	**CO2**	Evaluate

UNIT III – NETWORK LAYER				
Network Layer Services – Packet switching – IPV4 Addresses: Classful addressing -classless addressing – Network Layer Protocol: Internet Protocol (IP) – Routing Algorithms: Distance vector routing- Link State routing- Unicast routing algorithm: OSPF– Multicasting Basics – IPV6 Addressing – IPV6 Protocol				
PART – A				
Q.No	**Questions**	**BT Level**	**CO**	**Competence**
1.	Write the BGP Message types.	BTL 1	**CO3**	Remember
2.	What are the metrics used by routing protocols?	BTL 1	**CO3**	Remember
3.	Choose the class of the following IP address: (a) 110.34.56.45 (b) 212.208.63.23	BTL 2	**CO3**	Understand
4.	How would you design Class A, Class B and Class C of IP?	BTL 1	**CO3**	Remember
5.	Interpret the address space IPv4.	BTL 2	**CO3**	Understand
6.	Define routing.	BTL 2	**CO3**	Understand
7.	Draw the sketch of IPv4 packet header.	BTL 1	**CO3**	Remember

8.	What is Border Gateway Protocol (BGP).	BTL 1	**CO3**	Remember
9.	Compare unicast and multicast addressing.	BTL 2	**CO3**	Understand
10.	Discover the network address in a class A subnet with the IP address of one of the hosts as 25.34.12.56 and mask 255.255.0.0?	BTL 2	**CO3**	Understand
11.	Demonstrate the need for sub netting?	BTL 1	**CO3**	Remember
12.	Explain packetizing.	BTL 2	**CO3**	Understand
13.	How can the routing be classified?	BTL 2	**CO3**	Understand
14.	What is the need for fragmentation?	BTL 2	**CO3**	Understand
15.	Show the need for network layer.	BTL 1	**CO3**	Remember
16.	Analyze how routers differentiate the incoming unicast, multicast and broadcast IP packets.	BTL 1	**CO3**	Remember
17.	What is multicast routing?	BTL 2	**CO3**	Understand
18.	Can you relate the two different classes of routing protocol?	BTL 2	**CO3**	Understand
19.	What are different types of multicast routing?	BTL 1	**CO3**	Remember
20.	What is meant by hop count?	BTL 2	**CO3**	Understand
21.	Recommend the benefits of Open Shortest Path First (OSPF) protocol?	BTL 1	**CO3**	Remember
22.	Determine the two major mechanisms defined to help transition from IPv4 to IPv6.	BTL 1	**CO3**	Remember
23.	Test whether the following IPv6 address notations are correct. (a) ::0F53:6382:AB00:67DB:BB27:7332 (b) 7803:42F2:::88EC:D4BA:B75D:11CD	BTL 2	**CO3**	Understand
24.	Illustrate about all the metrics used by routing protocols.	BTL 2	**CO3**	Understand
	PART – B			
1	Explain in detail the operation of OSPF protocol by considering a suitable network. **(13)**	BTL 4	**CO3**	Analyze
2	Summarize about the ARP packet and encapsulation of ARP. **(13)**	BTL 3	**CO3**	Apply
3	Explain the Distance Vector routing algorithm. Analyze its limitations comparing with other routing algorithms.**(13)**	BTL 4	**CO3**	Analyze
4	Describe the multicast routing in detail. **(13)**	BTL 3	**CO3**	Apply
5	Explain about IPv6? CompareIPv4 and IPv6. **(13)**	BTL 3	**CO3**	Apply
6	Examine the position of IPv4 in TCPIP suit.**(13)**	BTL 4	**CO3**	Evaluate
7	(i) What is Internet multicasting? Explain in detail. **(8)** (ii) Discuss in detail the various aspects of IPV6.**(5)**	BTL 3	**CO3**	Apply
8	With an example network scenario explain the mechanism of Routing Information Protocol and specify the routing table contents. **(13)**	BTL 3	**CO3**	Apply
9	Develop in detail the datagram approach: Connectionless services.**(13)**	BTL 5	**CO3**	Evaluate

10	(i) Analyze the Link State algorithm in detail. **(4)** (ii) Consider the network shown in Fig 1. Computer the shortest path from C to all other . **(4)** (iii)Nodes using Link-State algorithm. Also update the forwarding table of node C. **(5)** 	BTL 4	**CO3**	Analyze

11.	(i) Describe in detail about reliable flooding. **(6)** (ii) Explain Link State Packet in detail**.(7)**	BTL 3	**CO3**	Apply
12.	Discuss in detail about open source shortest path routing with neat diagrams. **(13)**	BTL 3	**CO3**	Apply
13.	Examine the function of the Border Gateway Protocol used for inter domain routing in internetwork. **(13)**	BTL 3	**CO3**	Apply
14.	Evaluate and Explain the error reporting messages in ICMP. **(13)**	BTL 5	**CO3**	Evaluate
15.	Describe in detail the operation of Virtual-Circuit Approach.**(13)**	BTL 4	**CO3**	Analyze
16.	Compare Classful Addressing and Classless Addressing. **(13)**	BTL 5	**CO3**	Evaluate
17.	Explain the working of Link -state Routing in detail. **(13)**	BTL 3	**CO3**	Apply
	PART C			
1.	Find the class of each IP address. Give suitable explanation. i)227.12.14.87 **(3)** ii)193.14.56.22 **(3)** iii) 14.23.120.8 (**3)** iv) 252.5.15.111 **(3)** v) 134.11.78.56 **(3)**	BTL 5	**CO3**	Evaluate
2.	Why subnetting is necessary? With suitable example, develop the concept of subneting in class B network. **(15)**	BTL 6	**CO3**	Create
3.	(i) Interpret the function of Routing Information Protocol(RIP). **(8)** (ii) Draw the IPv6 packet header format. **(7)**	BTL 5	**CO3**	Evaluate
4.	Assess and explain about the transition from IPv4 to IPv6. **(15)**	BTL 5	**CO3**	Evaluate
5.	(i) Consider sending a 2400-byte datagram into a link that has an MTU of 700 bytes. Suppose the original datagram is stamped with the identification number 422. How many fragments are generated? What are the values in the various fields in the IP datagram(s) generated related to fragmentation? **(7)** (ii) Discuss the fundamentals and advantages of Open Shortest Path First protocol. **(8)**	BTL 6	**CO3**	Create
	UNIT-IV TRANSPORT LAYER			
	Introduction – Transport Layer Protocols – Services – Port Numbers – User Datagram Protocol (UDP) – Transmission Control Protocol (TCP) – SCTP.			
	PART – A			

Q.No	Questions	BT Level	CO	Competence
1.	Conclude what would you infer from the term RTT?	**BTL 1**	**CO4**	**Remember**
2.	List the flag used in TCP header.	**BTL 1**	**CO4**	**Remember**
3.	Summarize IP addresses versus port numbers	**BTL 2**	**CO4**	**Understand**
4.	Give the types of data delivery.	**BTL 1**	**CO4**	**Remember**
5.	What is the purpose of TCP push operation?	**BTL 2**	**CO4**	**Understand**
6.	Identify how a well-known port different from an ephemeral port?	**BTL 2**	**CO4**	**Understand**
7.	List the different phases used in TCP connection.	**BTL 1**	**CO4**	**Remember**
8.	Differentiate between TCP and UDP.	**BTL 1**	**CO4**	**Remember**
9.	Examine the performance of three-way handshaking.	**BTL 2**	**CO4**	**Understand**
10.	Identify when can an application make use of UDP?	**BTL 2**	**CO4**	**Understand**
11.	Identify the Pseudo header frame format for header	**BTL 1**	**CO4**	**Remember**
12.	Classify the services provided by Transport layer protocol.	**BTL 2**	**CO4**	**Understand**
13.	List the various congestion control techniques in TCP.	**BTL 2**	**CO4**	**Understand**
14.	How does UDP address flow control mechanism?	**BTL 2**	**CO4**	**Understand**
15.	State the purpose of service model.	**BTL 1**	**CO4**	**Remember**
16.	Assess the responsibility of URG and SYN flag.	**BTL 1**	**CO4**	**Remember**
17.	Analyze on how RTT is computed?	**BTL 2**	**CO4**	**Understand**
18.	Justify that TCP is a reliable byte stream protocol?	**BTL 2**	**CO4**	**Understand**
19.	Classify the advantages of connection oriented services over connectionless services.	**BTL 1**	**CO4**	**Remember**
20.	Why TCP services are called Stream delivery services?	**BTL 2**	**CO4**	**Understand**
21.	What is a socket address?	**BTL 1**	**CO4**	**Remember**
22.	Formulate what will happen if Congestion Control is not implemented in a Network.	**BTL 1**	**CO4**	**Remember**
23.	List the TCP services.	**BTL 2**	**CO4**	**Understand**
24.	Interpret on unicast, multicast and broadcast routing.	**BTL 2**	**CO4**	**Understand**
PART – B				
1	(i) Draw a TCP state transition diagram for connection management. **(7)** (ii) If IP provides connectionless service. How TCP supports connection oriented service? **(6)**	**BTL 3**	**CO4**	**Apply**

2	(i) Examine the Three Way Handshake protocol to establish the transport level connection. **(7)** (ii) Analyze the various duties of Transport Layer. **(6)**	**BTL 4**	**CO4**	**Analyze**
3	With a neat architecture, explain TCP in detail. **(13)**	**BTL 4**	**CO4**	**Analyze**
4	Discuss about i)Reliablevsunreliable**(7)** ii)Multiplexing and demultiplexing **(6)**	**BTL 3**	**CO4**	**Apply**
5	Define UDP. Discuss the operations of UDP. Explain UDP checksum with one example. **(13)**	**BTL 5**	**CO4**	**Evaluate**
6	Discuss in detail the various congestion control mechanisms in TCP. **(13)**	**BTL 4**	**CO4**	**Analyze**
7	Explain adaptive flow control and retransmission techniques used in TCP. **(13)**	**BTL 3**	**CO4**	**Apply**
8	(i) Analyze how reliable and ordered delivery is achieved through TCP. **(7)** (ii)Examine why does TCP uses an adaptive transmission and describe its mechanism. **(6)**	**BTL 4**	**CO4**	**Analyze**
9	Identify and explain the various functionalities of SCTP. **(13)**	**BTL 3**	**CO4**	**Apply**
10	Summarize TCP segments format in detail. **(13)**	**BTL 5**	**CO4**	**Evaluate**
11	Analyze various congestion avoidance techniques in TCP. **(13)**	**BTL 4**	**CO4**	**Analyze**
12	(i) Explain how TCP manages a byte stream. **(7)** (ii) List and explain the states involved in TCP. **(6)**	**BTL 4**	**CO4**	**Analyze**
13	(i) Organize three ways of connection termination in TCP using state transition diagram. **(7)** (ii)Describe in detail about reliable flooding. **(6)**	**BTL 3**	**CO4**	**Apply**
14	Interpret a network that makes use of sliding window protocol and explain in detail the protocol used. **(13)**	**BTL 5**	**CO4**	**Evaluate**
15	Write the comparison between of TCP segment and SCTP packet. **(13)**	**BTL 3**	**CO4**	**Apply**
16	(i) Formulate how would you differentiate UDP and TCP? **(7)** (ii) Will you state or interpret in your own words about flow control in TCP and UDP with an example. **(6)**	**BTL 6**	**CO4**	**Create**
17	(i) Explain the operation of Go-Back-N protocol. **(6)** (ii) With a diagram explain about TCP connection management. **(7)**	**BTL 4**	**CO4**	**Analyze**
1	Discuss the adaptive transmission mechanism and propose how it has evolved over time as the internet community has gained more experience using TCP. **(15)**	**BTL 6**	**CO4**	**Create**
2	Discuss on (i)Position of TCP, UDP, SCTP in TCP/IP protocol suite **(8)** (ii)Ports in UDP **(7)**	**BTL 6**	**CO4**	**Create**
3.	(i) Can you explain why we need four (or sometimes three) segments for connection termination in TCP? **(8)** (ii) Assess the justification for having variable field lengths for the fields in the TCP header. **(7)**	**BTL 5**	**CO4**	**Evaluate**
4	Explain the various fields of TCP header and the working of the TCP. Protocol. **(15)**	**BTL 5**	**CO4**	**Evaluate**
5.	Develop with examples the three mechanisms by which congestion control is achieved in TCP. Differentiate these mechanisms. **(15)**	**BTL6**	**CO4**	**Create**

UNIT V APPLICATION LAYER				
WWW and HTTP – FTP – Email –Telnet –SSH – DNS – SNMP				
PART – A				
Q.No	**Questions**	**BT Level**	**CO**	**Competence**
1.	Define SMTP.	**BTL 1**	**CO5**	**Remember**
2.	Define Persistent and Non-persistent connections.	**BTL 1**	**CO5**	**Remember**
3.	Mention the types of HTTP messages	**BTL 2**	**CO5**	**Understand**
4.	What is the purpose of FTP?	**BTL 1**	**CO5**	**Remember**
5.	How to visualize the diagrammatic example using DNS?	**BTL 2**	**CO5**	**Understand**
6.	How would you discover MIME types and subtypes?	**BTL 2**	**CO5**	**Understand**
7.	Mention the different levels in domain name space.	**BTL 1**	**CO5**	**Remember**
8.	Examine on the term root server	**BTL 1**	**CO5**	**Remember**
9.	Outline the need of DNS?	**BTL 2**	**CO5**	**Understand**
10.	Examine the protocol used for e-mail security.	**BTL 2**	**CO5**	**Understand**
11.	Interpret on telnet	**BTL 1**	**CO5**	**Remember**
12.	Identify the fourth scenario of electronic mail	**BTL 2**	**CO5**	**Understand**
13.	Interpret the use of Hyper Text Transfer Protocol (HTTP).	**BTL 2**	**CO5**	**Understand**
14.	Recommend the groups of HTTP header?	**BTL 2**	**CO5**	**Understand**
15.	How does MIME enhance SMTP?	**BTL 1**	**CO5**	**Remember**
16.	Discover the usage of conditional get in HTTP.	**BTL 1**	**CO5**	**Remember**
17.	Identify the three basic pieces of MIME with example.	**BTL 2**	**CO5**	**Understand**
18.	Differentiate IMAP and POP.	**BTL 2**	**CO5**	**Understand**
19.	Differentiate IMAP and SMTP.	**BTL 1**	**CO5**	**Remember**
20.	What is the use of SNMP protocol in a network?	**BTL 2**	**CO5**	**Understand**
21.	How would you express URL?	**BTL 1**	**CO5**	**Remember**
22.	Propose a comparison between GET and SET in SNMP	**BTL 1**	**CO5**	**Remember**
23.	Draw and construct the scenario of Electronics mail.	**BTL 2**	**CO5**	**Understand**
24.	Differentiate FQDN and PQDN	**BTL 2**	**CO5**	**Understand**
PART-B				
1	(i)Examine how SMTP transfers message from one host to another with suitable illustration. **(6)** (ii)Assess IMAP with its state transition diagram. **(7)**	**BTL 4**	**CO5**	**Analyze**
2	What is SSH? Explain it briefly. **(13)**	**BTL 3**	**CO5**	**Apply**
3	Summarize on the services of User Agent. **(13)**	**BTL 5**	**CO5**	**Evaluate**
4	Analyze in detail about DNS operation. **(13)**	**BTL 4**	**CO5**	**Analyze**
5	(i) Develop in detail about SNMP messages. **(7)** (ii) Organize the role of POP3 in Electronic mail applications. **(6)**	**BTL 3**	**CO5**	**Apply**

6	Write short notes on: (i) IMAP (**7**) (ii)MIME **(6)**	**BTL 4**	**CO5**	**Analyze**
7	Identify the frame structure of DNS messages also narrate encapsulation. **(13)**	**BTL 4**	**CO5**	**Analyze**
8	Explain in detail about HTTP operation. **(13)**	**BTL 3**	**CO5**	**Apply**
9	Assess on the concept of NVT. **(13)**	**BTL 5**	**CO5**	**Evaluate**
10	Hierarchy of name servers. **(13)**	**BTL 6**	**CO5**	**Create**
11	Examine your understanding on File Transfer Protocol **(13)**.	**BTL 5**	**CO5**	**Evaluate**
12	(i) Summarize the elements of network management and explain the operation of SNMP protocol in detail. **(7)** (ii) Infer the functions performed by of DNS. Give example. **(6)**	**BTL 3**	**CO5**	**Apply**
13	Describe the message format, message transfer and the underlying protocol involved in the working of the electronic mail. **(13)**	**BTL 3**	**CO5**	**Apply**
14	(i).Tabulate the various HTTP request operations. **(7)** (ii)Identify the comparison between SMTP, MIME and IMAP. **(6)**	**BTL 3**	**CO5**	**Apply**
15.	Write in detail about DNS and its frame format. **(13)**	**BTL 4**	**CO5**	**Analyze**
16.	Assess the importance of Simple Network Management Protocol (SNMP)? **(13)**	**BTL 4**	**CO5**	**Analyze**
17.	Formulate the working of Email in detail **(13)**.	**BTL 4**	**CO5**	**Analyze**
PART C				
1.	(i).Elaborate the message transfer using Simple Mail Transfer Protocol. **(8)** (ii) Summarize the basics of POP3 and IMAP mail access protocols. **(7)**	**BTL 6**	**CO5**	**Analyze**
2.	Describe the role of a DNS on a computer network with reference to its components **(15)**	**BTL 5**	**CO5**	**Evaluate**
3.	(i) Discuss the features of HTTP and also discuss how HTTP works. **(8)** (ii) Explain about Application layer and its services in detail? **(7**)	**BTL 5**	**CO5**	**Evaluate**
4.	Elaborate on client/server application program TELNET. **(15)**	**BTL 5**	**CO5**	**Analyze**
5.	Summarize the major concepts of WWW and HTTP. **(15)**	**BTL 6**	**CO5**	**Evaluate**