VALLIAMMAI ENGNIEERING COLLEGE

SRM Nagar, Kattankulathur – 603203.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

QUESTION BANK

Degree & Branch	**:**	**B.E – C.S.E.**
Year & Semester	**:**	**II / IV**
Section	**:**	**CSE 1 & 2**
Subject Code	**:**	**CS6551**
Subject Name	**:**	**COMPUTER NETWORKS**
Name of the Teacher	**:**	**Mr. G. Kumaresan & Ms. N. Meenakshi**

UNIT - I
PART A

1	**Describe**computer networks.	Remember	BTL -1
2	What**differentiates** a computer network from other types of networks?	Analyze	BTL -4
3	**Differentiate** Internetworking and Intranetworking?	Understand	BTL -2
4	How would you **describe** routing?	Remember	BTL -1
5	Can you **list** three general classes of failure?	Remember	BTL -1
6	In what way would you **summarize**circuit switched and packet switched networks?	Evaluate	BTL -5
7	**Define**router and gateway.	Remember	BTL -1
8	**Compare and contrast**Unicast, Multicast, and Broadcast?	Analyze	BTL -4
9	**Define** protocol.	Remember	BTL -1
10	Can you **interpret** what is happening in synchronous time division multiplexing?	Understand	BTL -2
11	How would you **describe** Multiplexing and Demultiplexing?	Remember	BTL -1
12	**Compare** LAN, WAN and MAN?	Analyze	BTL -4
13	How would you **illustrate**the basic idea behind error detection?	Apply	BTL -3
14	**Discuss**about socket.	Understand	BTL -2
15	What would happen if the acknowledgement to the original packet is	Create	BTL -6

	lost? Draw the timeline for this scenario.		
16	**Solve** the following: How many bits of data in a transcontinental channel with a one-way latency of 50ms and a bandwidth of 45Mbps can hold?	Apply	BTL -3
17	**Demonstrate** your understanding of character stuffing?	Apply	BTL -3
18	How would you **formulate** Shanon's Theorem?	Create	BTL -6
19	How would you **summarize** Manchester encoding? Draw the NRZ encoding for the bit stream 0010111101000010.	Understand	BTL -2
20	Can you**discriminate** bandwidth and latency?	Evaluate	BTL -5

PART B

1	How would you **summarize**the requirements of building a network? (16)	Understand	BTL -2
2	**Explain** in detail about internet architecture with neat diagram? (16)	Analyze	BTL -4
3	**Examine** OSI architecture with neat diagram? (16)	Remember	BTL -1
4	**Evaluate**and explain about your understanding about network software? (8) Explain in detail about sockets. (8)	Evaluate	BTL -5
5	**Summarize** about performance of computer network? (16)	Understand	BTL -2
6	Will you state and **describe** in your own words about a) Byte-oriented framing. (6) b) Bit-oriented framing. (5) c) Clock-based framing. (5)	Understand	BTL -1
7	a) Based on what you learn **develop** a model for Two – Dimensional parity. (8) b) Based on what you learn **develop** a model for Internet Checksum Algorithm.(8)	Create	BTL -6
8	(a) How would you **illustrate** your view of Cyclic Redundancy Check? (8)	Apply	BTL -3
	(b) **Calculate** CRC using polynomial long division method for the following data: (8) M(x) = 10011010	Apply	BTL -3

	C(x) = 1101			
9	**Explain** in detail about Stop-and-wait protocol.	(16)	Analyze	BTL -4
10	**Describe**Sliding Window Protocol in detail?	(16)	Remember	BTL -1

UNIT-II

PART A

1	**Describe** Media Access Control?	Remember	BTL -1
2	How would you **describe** repeater?	Remember	BTL -1
3	How will you **summarize**an Ethernet Adaptor?	Understand	BTL -5
4	**Define** Exponential backoff?	Remember	BTL -1
5	**Define** Bluetooth?	Remember	BTL -1
6	Can you **classify**the steps of Scanning?	Analyze	BTL -4
7	Can you **explain** what Piconet is?	Understand	BTL -4
8	How would you **describe** access point?	Remember	BTL -1
9	**Differentiate** switching and bridging?	Analyze	BTL -2
10	Can you **explain** virtual circuit switching?	Analyze	BTL -4
11	**Illustrate**the function of hop by hop flow control?	Apply	BTL -3
12	How will you**develop**a virtual private network?	Create	BTL -6
13	What examples can you find to **illustrate** tunneling?	Apply	BTL -3
14	**Show** your understanding about payload?	Apply	BTL -3
15	How would you **design** Class A, Class B and Class C of IP addresses?	Create	BTL -6
16	**Discuss** the 2 scaling concerns that the CIDR addresses.	Understand	BTL -2
17	**Give**the ARP packet format for mapping IP addresses into Ethernet addresses.	Evaluate	BTL -2
18	**Summarize** the DHCP packet format.	Evaluate	BTL -5
19	How would you **define**ICMP.	Remember	BTL -1
20	**Differentiate**forwarding and routing.	Understand	BTL -2

PART B

1	a) How will you **describe** the Physical properties of Ethernet	Remember	BTL -1

	(802.3)? Detail your answer with neat illustration? (8) **b)** Describe in detail about access protocols in IEEE802.3 Ethernet. (8)		
2	How would you **demonstrate**your understanding of problems about Ethernet LAN? (16)	Apply	BTL -3
3	**a) Explain** in detail about collision avoidance in Wi-Fi (802.11)(8) **b) Explain** in detail about distribution system in Wi-Fi (802.11)(8)	Analyze	BTL -4
4	How would you **describe** about Bluetooth and explainwith neat sketch about its architecture? (16)	Remember	BTL -1
5	a) How would you **differentiate** Switching and Bridging? Explain with neat diagram. (8) **b) Summarize** your understanding about virtual Circuit switching. (8)	Understand	BTL -2
6	**i) Explain** in detail about the service model and global addressing of Internet Protocol. (8) **ii) Explain** in detail about datagram forwarding and subnetting in IP. (8)	Analyze	BTL -4
7	**Define** ARP?**Describe** the details with neat diagram. (16)	Understand	BTL -1
8	Will you state and **summarize**in your own words about CIDR. (16)	Understand	BTL -2
9	**Evaluate**DHCP and explain in detail about DHCP? (16)	Evaluate	BTL -5
10	Based on what you learn **develop** a model of ICMP? (16)	Create	BTL -6

UNIT-III

PART A

1	Compare and **contrast** Forwarding and Routing?	Understand	BTL -2
2	How would you **describe** Interior Gateway Protocol (IGP)?	Remember	BTL -1
3	Can you **differentiate** the two different classes of routing protocol?	Analyze	BTL -4
4	How would you **describe** distance vector routing?	Remember	BTL -1
5	In what way would you **rank** convergence?	Evaluate	BTL -5
6	**Define** count to infinity problem.	Remember	BTL -1

7	**Interpret** about split horizon with poison reverse?	Understand	BTL -2
8	**Define** Split horizon.	Remember	BTL -1
9	**Discuss** about RIP.	Understand	BTL -2
10	**Define** Link State Routing.	Remember	BTL -1
11	Can you **infer** the sketch of IPv6 Packet Header?	Analyze	BTL -4
12	**Give** the OSPF header format?	Understand	BTL -2
13	**Define** Reliable Flooding.	Remember	BTL -1
14	**Explain** Load Balancing?	Analyze	BTL -4
15	**Illustrate** about Switching?	Apply	BTL -3
16	**Rewrite** in your own words about Line Rate?	Create	BTL -6
17	Can you **compare** IPv4 and IPv6?	Evaluate	BTL -5
18	What examples can you find to **deminstrate** compute delay for the packet?	Apply	BTL -3
19	How would you **show** your understanding of Multicast?	Apply	BTL -3
20	Based on what you know, **generalize** the term Network Address Translation?	Create	BTL -6

PART B

1	**Describe** in detail about Switching and Forwarding? (16)	Remember	BTL -1
2	Can you **substitute** an alternative protocol forPIM? Justify your answer. (16)	Evaluate	BTL -5
3	**a) Apply** your understanding about Packet format of IPv6? (8) **b) Apply** your understanding about Global Unicast Addresses of IPv6? (8)	Apply	BTL -3
4	a) How would you **summarize** the challenges ininterdomain routing? (8) b) How would you **summarize** the basics of BGP and common AS relationship and policies? (8)	Understand	BTL -2
5	**Describe** in detail about RIP. (16)	Remember	BTL -1
6	(a) Can you **discuss** in detail what is happening in link state? (8) (b) **Discuss** about subnetting. (8)	Understand	BTL -2
7	**a) Examine** the elements used in defining the Multicast? Explain in detail. (8) **b) Apply** your understanding about Multicast Addresses. (8)	Apply	BTL -3
8	**Pointout** the function of DVMRP? Narrate in detail. (16)	Analyze	BTL -4
9	**a) Describe** in detail about the OSPF. (8) **b) Describe** in detail about reliable flooding. (8)	Remember	BTL -1
10	**Generalize** and explain about Multicast address? (16)	Create	BTL -6

UNIT-IV
PART A

1	How would you **describe** the header format of UDP?	Remember	BTL -1
2	What ideas can you **pointout** that TCP is a reliable byte stream protocol?	Analyze	BTL -4
3	**Differentiate** UDP and TCP?	Understand	BTL -2
4	How would you **describe** the header format of TCP?	Remember	BTL -1
5	Can you **list** the three ways of handshake?	Remember	BTL -1
6	**Measure** the performance of TCP State Transition Control?	Evaluate	BTL -5
7	**Define** nagles algorithm.	Remember	BTL -1

8	What would you **infer** from the term RTT?	Analyze	BTL -4
9	**Define** Estimated RTT.	Remember	BTL -1
10	**Summarize** what is happening in Congestion Control?	Understand	BTL -2
11	**Define** RED.	Remember	BTL -1
12	**Analyze** the value or importance of Congestion Window?	Analyze	BTL -4
13	**Apply** your understanding ofAIMD?	Apply	BTL -3
14	**Give** the processes involved in Slow Start?	Understand	BTL -2
15	**Combine** your opinion about integrated service?	Create	BTL -6
16	What examples can you find to **demonstrate** Quality of service approaches?	Apply	BTL -3
17	How would you **show** your understanding ofadmission control?	Apply	BTL -3
18	Based on what you know, **generalize** the term Differentiated service?	Create	BTL -6
19	How would you **summarize** Expedited forwarding?	Understand	BTL -2
20	Can you **assess** the reason behind assured forwarding?	Evaluate	BTL -5

PART B

1	How would you **describe** the operation of TCP with neat sketch on it? (16)	Remember	BTL -1
2	**Explain** in detail about sliding window protocol? (16)	Analyze	BTL -4
3	i) **Describe** in detail about UDP header format with neat sketch.(8) ii) **Describe** in detail about UDP message queue technique with neat sketch. (8)	Remember	BTL -1
4	i) How would you **differentiate** UDP and TCP? (8) ii) Will you state or interpret in your own words about flow control in TCP and UDP with an example. (8)	Understand	BTL -2
5	**i)** **Describe** in detail about the three way handshake protocol for connection establishment in TCP. (8) **ii)** Describe in detail about reliable flooding. (8)	Remember	BTL- 1
6	How would you **summarize** TCP congestion control like i) AIMD (6) ii) Slow start (5) iii) Fast transmit and fast recovery (5)	Understand	BTL -2

7	How would you **apply** your understanding about the RED algorithm? Explain in detail. (16)	Apply	BTL -3
8	**Explain** in detail about congestion avoidance in TCP like i) DECbit (8) ii) Source based congestion avoidance (8)	Analyze	BTL -4
9	What conclusions can you drawin analyzing RSVP protocol? **Support**your answer with a neat sketch. (16)	Evaluate	BTL -5
10	Based on what you know, **generalize** the term differentiated services? (16)	Create	BTL -6

UNIT-V
PART A

1	How would you **describe** the message format of SMTP?	Remember	BTL -1
2	Can you **list** the five types of HTTP result codes?	Analyze	BTL -1
3	How would you **rank** the hierarchy of name servers?	Evaluate	BTL -5
4	**Analyze** the value or importance ofSNMP?	Analyze	BTL -4
5	Can you **list** the three basic pieces ofMIME?	Remember	BTL -1
6	Can you **interpret** what is happening in the state transition of IMAP?	Understand	BTL -2
7	**Differentiate** IMAP and SMTP.	Understand	BTL -2
8	**Test** what would happen when you try to open aURL?	Evaluate	BTL -5
9	Can you **summarize** what is happening inTCP connection?	Understand	BTL -2
10	**Explain** Management Information Box?	Remember	BTL -4
11	How would you **describe** aWeb Service?	Remember	BTL -1
12	How would you **summarize** SOAP message structure?	Understand	BTL -2
13	How would you **apply** your understanding ofWSDL?	Apply	BTL -3
14	What information would you use to **generalize** the view that SIP is an application-layer protocol?	Create	BTL -6
15	**Define** Routing overlay.	Remember	BTL -1
16	**Illustrate** the protocol used for simple mail exchange?	Apply	BTL -3
17	**Define** name resolution.	Remember	BTL -1
18	**Compare** GET and SET in SNMP?	Analyze	BTL -4
19	What examples can you find to **demonstrate** B 2 B integration?	Apply	BTL -3

20	Based on what you know, **generalize** the term Message Exchange Pattern?	Create	BTL -6

PART B

1	**Describe** in detail about Traditional applications? (16)	Remember	BTL -1
2	What elements would you use to **demonstrate** the MIME type? Explain in detail. (16)	Apply	BTL -3
3	i) Summarize the request message format of HTTP. (8) ii) Summarize the response message format of HTTP. (8)	Create	BTL -5
4	How would you **summarize** the concepts of SMTP? (16)	Understand	BTL -2
5	Can you **associate** what is happening inDomain Name Server? (16)	Understand	BTL -2
6	What approach would you used to **demonstrate** network management protocol? (16)	Apply	BTL -3
7	**Describe** in detail about the following in Electronic mail. i) Message format (6) ii) Message transfer (5) iii) Mail reader (5)	Remember	BTL -1
8	What is the function of POP3? **Explain** in detail.	Analyze	BTL -4
9	Can you s**ubstitute** an alternative protocol forIMAP? Justify your answer. (16)	Evaluate	BTL -6
10	**(a) Describe** in detail about the WSDL in web services. (8) **(b) Describe** in detail about SOAP in web services. (8)	Remember	BTL -1