

**18CSC302J-COMPUTER NETWORKS**  
**QUESTION BANK**  
**UNIT-I**  
**(MULTIPLE CHOICE QUESTIONS)**

S.NO	QUESTION	BLOOMS LEVEL	CLO	PG. NO
1.	Protocol used for mapping the physical addresses to logical address is A. ARP B. RARP C. ICMP D. IGMP ANSWER: B	L1	CLO1	228
2.	Protocol used to resolve the logical address to an ethernet address A. ARP B. RARP C. ICMP D. IGMP ANSWER: A	L1	CLO1	220
3.	UDP provides additional services over Internet Protocol A. Routing and switching B. Sending and receiving of packets C. Multiplexing and demultiplexing D. Demultiplexing and error checkin ANSWER: D	L1	CLO1	417
4.	The transport layer protocol used for real time multimedia A. TCP B. UDP C. ARP D. RARP ANSWER: B	L1	CLO1	418
5.	One of the header fields in an IP datagram used to prevent packet looping A. Header checksum B. Fragment Offset C. TOL D. TOS ANSWER: C	L2	CLO1	163
6.	ICMP always reports error messages to A. Destination B. Router	L1	CLO1	246

	C. Source D. Previous router ANSWER: C			
7.	Host A sends a datagram to Host B with size 7000 which is routed through router R1. Ethernet is used for transmission where MTU is 1500. How many fragments will be generated?  a. 4 b. 5 c. 6 d. 7 ANSWER: b	L1	CLO1	
8.	Which program is used to find a host is live and responding during debugging A. Ping B. Shell C. Traceroute D. Tracert ANSWER: A	L2	CLO1	126
9.	Command used to trace the path of a packet from the source to destination in windows A. Ping B. Locater C. Traceroute D. Tracert ANSWER: D	L2	CLO1	96
10.	No ICMP error message will be generated for a datagram for a ____ Address A. Unicast B. Multicast C. Physical D. Logical ANSWER: B	L1	CLO1	248
11.	What is the maximum packet size of IP PROTOCOL?  a. 65,536 bytes b. 1220 bytes c. 65,535 bytes d. 64 bytes ANSWER: c	L1	CLO1	
12.	Field that is used to detect errors over the entire user datagram	L1	CLO1	35

	A. Checksum B. source port C. udp header D. destination port ANSWER: A			
13.	If the value in the protocol field is 6, The transport layer protocol used is A. TCP B. UDP C. ICMP D. IGMP ANSWER: B	L2	CLO1	416
14.	The field that helps to check rearrangement of fragments A. Flag B. TTL C. TOS D. Offset ANSWER: D	L1	CLO1	216
15.	The traffic class field is used to specify the priority of the IP packet which is a similar functionality to the ____field in the IPv4 header A. TOS B. TTL C. Flag D. Offset ANSWER: A	L2	CLO1	197
16.	An Ethernet multicast physical address is in the range of _____ a. 02:00:5E:00:00:00 to 01:00:5E:7F:FF:FF. b. 01:00:5E:00:00:00 to 02:00:5E:7F:FF:FF. c. 02:00:5E:00:00:00 to 01:00:5E:7F:FF:FF. d. 01:00:5E:00:00:00 to 01:00:5E:7F:FF:FF. ANSWER: D	L1	CLO1	
17.	IPv6 packet can live up to ____ router hops A. 256 B. 512 C. 255 D. 511 ANSWER: C	L1	CLO1	215
18.	Internet Group Management Protocol (IGMP) relates to A. Session Layer B. Transport Layer C. Network Layer	L1	CLO1	252

	D. Data link Layer ANSWER: C			
19.	The maximum transmission unit value for FDDI ring is A. 1500 B. 2552 C. 4352 D. 2343 ANSWER: C	L2	CLO1	196
20.	An ARP packet is encapsulated directly into ____ Frame A. Physical B. Network C. Data link D. Transport ANSWER: C	L1	CLO1	236
21.	Identify the debugging tool which is used to find if a host is alive or responding a. ping b. traceroute c. FTP d. UDP ANSWER: a	L1	CLO1	
22.	The protocol used to create sub netting effect A. ARP B. RARP C. ICMP D. Proxy ARP ANSWER: A	L1	CLO1	235
23.	Number of socket addresses needed to use the services of UDP A. 1 B. 2 C. 3 D. 4 ANSWER: B	L1	CLO1	423
24.	Server program informs TCP that it is ready to close connection is called as ____ a. Active close b. Passive close c. Active open d. Passive open	L1	CLO1	

	ANSWER: B			
25.	UDP packets are encapsulated in the form of A. Data link frame B. Ethernet frame C. TCP segment D. IP datagram ANSWER: D	L1	CLO1	426
26.	Which of the following is not a component of an ARP package A. Cache table B. Cache control module C. Checksum D. Queues ANSWER: C	L2	CLO1	237
27.	The length of logical address in TCP/IP is    a. 64 bits b. 32 bits c. 48 bits d. 16 bits  ANSWER: b	L1	CLO1	
28.	Two protocols can be used instead of RARP A. DHCP and ICMP B. Boot and ICMP C. IGMP and ICMP D. DHCP and Boot ANSWER: D	L1	CLO1	240
29.	Additional services provided by the UDP protocol over Internet Protocol is A. Demultiplexing and error checking B. Routing and switching C. Multiplexing and demultiplexing D. Sending and receiving of packets ANSWER: C	L1	CLO1	426
30.	Which field helps to check rearrangement of the fragments?	L1	CLO1	115

	A. offset B. Flag C. Identifier D. TTL ANSWER: A			
31.	IP is a ..... Datagram A. unreliable B. static C. connection oriented D. reliable ANSWER: A	L1	CLO1	117
32.	Select the bit size of the cumulative acknowledgement a. 64 bits b. 32 bits c. 16 bits d. 8 bits ANSWER: b	L1	CLO1	
33.	In _____, there is one source and a group of destinations a.Unicasting b.Multicasting c.Broadcasting d.Multitasking Answer: b	L1	CLO1	336
34.	Identify the Multicast applications a.Audio streams b.Teleconferencing c.Video streams d. Text related documents Answer:b	L2	CLO1	338
35.	Identify the block which is called Stream Multicast Group Block a.224.10.0.0/16 b.224.111.0.0/16	L2	CLO1	340

	c. 224.1.11.0/16 d. 224.1.0.0/16 Answer:d			
36.	_____allows multiple IP addresses for each end a. SCTP association b. TCP association c. UDP association d. FTP association Answer: a	L1	CLO1	505
37.	The connection establishment in TCP is called _____ a.Three-way handshaking b.Two way handshaking c. One way handshaking d.Four way handshaking Answer: a	L1	CLO1	442
38.	Identify the stream-oriented protocol a.UDP b.FTP c.TCP d.ICMP Answer: c	L2	CLO1	446
39.	_____segment consumes one sequence number if it does not carry data a.FIN b.ACK c.PSH d.TCP Answer: a	L1	CLO1	446
40.	Identify the heart of the error control mechanism.	L2	CLO1	466

	a.Segments b.Frame c.Datagram d. Retransmission of segments Answer: a			
41.	Which protocol can be best modeled as a Selective Repeat protocol. a.IP b.FTP c.TCP d. UDP Answer: C	L2	CLO1	467
42.	Find out actual window size. a minimum (cwnd) b. minimum (rwnd) c. maximum (rwnd, cwnd) d. minimum (rwnd, cwnd) Answer: C	L2	CLO1	473
43.	In the _____ algorithm, the size of the congestion window increases exponentially until it reaches a threshold a. Slow start b. RTT c.MSS d.CWND Answer: a	L1	CLO1	475
44.	_____ balances the rate a producer creates data with the rate a consumer can use the data. a.Error Control b. Flow control c.Checksum d. Congestion control Answer: b	L1	CLO1	459



45.	Which of the following protocols uses both TCP and UDP?  a.FTP  b.SMTP  c.Telnet  d.DNS  Answer: d	L2	CLO1	
46.	Which is used to check for a corrupted segment  a.FIN  b.Error  c.ACK  d. Checksum field  Answer: d	L2	CLO1	465
47.	_____reports a block of data that is out of order.  a. SACK  b.ACK  c. Cumulative Acknowledgement  d.FIN  Answer: a	L1	CLO1	465
48.	Identify the solution proposed to prevent the silly window syndrome  a.Additive Increase  b.Multiplicative Decrease  c.Clark's solution  d. Slow start  Answer: c	L2	CLO1	464
49.	A serious problem can arise in the _____when either the sending application program creates data slowly or the receiving application program consumes data slowly, or both.  a. Sliding window operation  b. silly window syndrome  c. Additive Increase  d.Multiplicative Decrease	L1	CLO1	463

	Answer: a			
50.	<p>Delaying the acknowledgment provides solution for _____.</p> <p>a. Sliding window operation</p> <p>b. silly window syndrome</p> <p>c. Additive Increase</p> <p>d. Multiplicative Decrease</p> <p>Answer: b</p>	L1	CLO1	463
51.	<p>Identify the protocol that uses multicast link state routing to create source-based trees.</p> <p>a. Multicast Open Shortest Path First</p> <p>b. Multicast Shortest path first</p> <p>c. Multicast Open Shortest Path</p> <p>d. Multicasting</p> <p>Answer: b</p>	L2	CLO1	359
52.	<p>_____ broadcasts packets, but creates loops in the systems.</p> <p>a. Unicasting</p> <p>b. Multicasting</p> <p>c. Flooding</p> <p>d. Broadcasting</p> <p>Answer: c</p>	L1	CLO1	360
53.	<p>Which of the following are TCP/IP protocols used at the Application layer of the OSI model?</p> <p>IP</p> <p>TCP</p> <p>Telnet</p> <p>FTP</p> <p>TFTP</p> <p>a.1 and 3</p> <p>b.1, 3 and 5</p> <p>c.3, 4 and 5</p>	L2	CLO1	432

	d. 1 and 2 Answer: c			
54.	A TCP packet is called as _____  a.Datagram  b.Frame  c.Segment.  d.Packet  Answer: c	L1	CLO1	435
55.	Which of the following are layers in the TCP/IP model?  1.Application  2.Session  3.Transport  4.Internet  5.Data Link  6.Physical  a.1 and 2  b.1, 3 and 4  c.2, 3 and 5  d.3, 4 and 5  Answer: b	L2	CLO1	432
56.	Identify the packet that is encapsulated in IP  a. Datalink frame  b.TCP packet  c. Frame  d. Physical layer packet  Answer: b	L2	CLO1	432
57.	Which protocol conserves the message Boundaries  a.UDP	L2	CLO1	503

	b.TCP			
	c.FTP			
	d. SMTP			
	Answer: a			

**18CSC302J-COMPUTER NETWORKS**  
**QUESTION BANK**  
**UNIT-II**  
**(MULTIPLE CHOICE QUESTIONS)**

S.NO	QUESTION	BLOOMS LEVEL	CLO	PG. NO
1.	<p>Bytes of data being transferred in each connection are numbered by TCP. These numbers start with a _____</p> <p>A. Fixed number</p> <p>B. Random sequence of 0's and 1's</p> <p>C. One</p> <p>D. Sequence of zero's and one's</p> <p><b>Answer: D</b></p>	L1	CLO2	406
2.	<p>Suppose a TCP connection is transferring a file of 1000 bytes. The first byte is numbered 10001. What is the sequence number of the segment if all data is sent in only one segment?</p> <p>A. 10000</p> <p>B. 10001</p> <p>C. 12001</p> <p>D. 11001</p> <p><b>Answer: D</b></p>	L2	CLO2	408
3.	<p>The socket function creates sockets on demand. It takes three integer arguments and returns an integer result:</p> <p>A. result = socket(pf, type, protocol)</p> <p>B. result = socket(df, type, protocol)</p> <p>C. result = socket(sf, type, protocol)</p> <p>D. result = socket(rf, type, protocol)</p> <p><b>Answer: A</b></p>	L1	CLO2	415
4.	<p>_____ is a structure that specifies the local address to which the socket should be bound, and argument addrlen is an integer that specifies the length of the address measured in bytes.</p> <p>A. Arg localaddr</p> <p>B. Address localaddr</p> <p>C. Addrlen localaddr</p> <p>D. Argument localaddr</p>	L1	CLO2	417

	<b>Answer: D</b>			
5.	<p>The two additional arguments are pointers to a socket address structure and an integer</p> <p>A. froaddr and addrlen</p> <p>B. fromaddr and addlen</p> <p>C. fromaddr and addrln</p> <p>D. frmaddr and adrlen</p> <p><b>Answer: C</b></p>	L1	CLO2	422
6.	<p>A process calls _____ to determine the address of the peer to which a socket connects.</p> <p>A. getpeemame</p> <p>B. putpeemame</p> <p>C. gtpeemame</p> <p>D. Ptpeemame</p> <p><b>Answer: A</b></p>	L1	CLO2	422
7.	<p>The _____ field contains a count of octets in the UDP datagram, including the UDP header and the user data.</p> <p>A. BYTE</p> <p>B. BIT</p> <p>C. LENGTH</p> <p>D. SERVICE</p> <p><b>Answer: C</b></p>	L1	CLO2	200
8.	<p>A. _____ is a thin protocol in the sense that it does not add significantly to the semantics of IP.</p> <p>A. TCP/IP</p> <p>B. UDP</p> <p>C. FTP</p> <p>D. TFTP</p> <p><b>Answer: B</b></p>	L1	CLO2	206
9.	<p>The Trivial File Transfer Protocol, TFTP, provides a small, simple alternative to _____ for applications that need only file transfer.</p> <p>A. FTP</p> <p>B. TCP</p> <p>C. UDP</p>	L1	CLO2	509

	D. TCP/IP <b>Answer: C</b>			
10.	Default subnet mask for class C network is  A. 127.0.0.5 B. 255.255.255.0 C. 255.255.0.0 D. 255.0.0.9 <b>Answer: B</b>	L2	CLO2	210
11.	_____ use network bandwidth better because they allow the sender to transmit multiple packets before waiting for an acknowledgement.  A. Sliding window protocols B. TCP window protocols C. Protocols D. Sliding window <b>Answer: A</b>	L1	CLO2	213
12.	The chief advantage of XDR is that it automates much of the data conversion task,programmers do not need to type _____ manually.  A. XDR system calls B. XDR calls C. XDR procedure calls D. XDR proc calls <b>Answer: C</b>	L1	CLO2	509
13.	The system call that makes the design possible is called select, and it applies to I/O in general, not just to communication over sockets: Select has the form:  A. mready = select(ndesc, indesc, outdesc, excdesc, timeout) B. ready = select(ndesc, indesc, outdesc, excdesc, timeout) C. aready = select(ndesc, indesc, outdesc, excdesc, timeout) D. nready = select(ndesc, indesc, outdesc, excdesc, timeout) <b>Answer: D</b>	L1	CLO2	425
14.	Argument name gives the address of an array of bytes where the name is to be stored,and argument length is an integer that specifies the length of the name  A. Array B. Socket C. Identifier	L1	CLO2	426

	D. Access Specifier <b>Answer: A</b>			
15.	The _____ provides four library functions that convert between the local machine byte order and the network standard byte order. A. socket B. socket TCP/IP C. socket FTP D. socket API <b>Answer: D</b>	L1	CLO2	428
16.	Procedure getprotobynumber allows a process to search for protocol information using the protocol number as a key: A. ptr = gtprotonumber(number) B. ptr = getprobynumber(number) C. ptr = getprotobynumber(number) D. ptr = getprotobynum(number) <b>Answer: C</b>	L1	CLO2	434
17.	To use _____, a program must create a socket, bind addresses to it, accept incoming connections, and then communicate using the read or write primitives. A. TCP B. FTP C. UDP D. IP <b>Answer: A</b>	L1	CLO2	441
18.	_____ pass control to the computer's operating system, while library routines are like other procedures that the programmer binds into a program. A. Array B. Socket C. Identifier D. System calls <b>Answer: D</b>	L1	CLO2	426
19.	The _____ provides four library functions that convert between the local machine byte order and the network standard byte order. A. sockets	L1	CLO2	428



	B. socket API C. socket TCP/IP D. socket AP <b>Answer: B</b>			
20.	Argument net is a _____ network IP address in host byte order, and argument local is the integer representing a local host address on that network, also in local host byte order.  A. 16-Bit B. 32-bit C. 8-Bit D. 64-bit <b>Answer: B</b>	L2	CLO2	430
21.	_____ reads a file that contains information like the name of the machine that runs the domain name server and stores the results in global structure res.  A. Res-init B. Res C. Res-in D. Res-I <b>Answer: A</b>	L1	CLO2	431
22.	Argument _____ is a pointer to a character string that contains a domain name for the host.  A. Names B. Namestr C. Namesr D. Namestring <b>Answer: B</b>	L1	CLO2	433
23.	Transport layer aggregates data from different applications into a single stream before passing it to _____ A.network layer B.data link layer C.application layer D.physical layer <b>Answer:A</b>	L1	CLO2	215
24.	User datagram protocol is called connectionless because _____ A.all UDP packets are treated independently by transport layer B.it sends data as a stream of related packets C.it is received in the same order as sent order	L1	CLO2	

	D.it sends data very quickly <b>Answer:A</b>			
25.	An endpoint of an inter-process communication flow across a computer network is called A.pipe B.socket C.Port D.machine <b>Answer: B</b>	L1	CLO2	428
26.	Which one of the following is a version of UDP with congestion control? A. datagram congestion control protocol B. stream control transmission protocol C. structured stream transport D. user congestion control protocol <b>Answer: A</b>	L2	CLO2	408
27.	Which methods are commonly used in Server Socket class? a)Public Output Stream get Output Stream () b)Public Socket accept () c)Public synchronized void close () d)Public void connect () <b>Answer:</b> b. (Public Socket accept ())	L2	CLO2	420
28.	Which constructor of Datagram Socket class is used to create a datagram socket and binds it with the given Port Number? a) Datagram Socket(int port) b) Datagram Socket(int port, Int Address address) c) Datagram Socket() d) Datagram Socket(int address) <b>Answer:</b> b. (Datagram Socket(int port, Int Address address))	L2	CLO2	425
29.	The client in socket programming must know which information? a) IP address of Server b) Port number c) Both IP address of Server & Port number d) Only its own IP address <b>Answer:</b> c. (Both IP address of Server & Port number)	L2	CLO2	426
30.	What does the java.net.InetAddress class represent? a) Socket b) IP Address c) Protocol	L1	CLO2	420

	d) MAC Address  <b>Answer:</b>  b. (IP Address)			
31.	Which classes are used for connection-less socket programming? a) Datagram Socket b) Datagram Packet c) Both Datagram Socket & Datagram Packet d) Server Socket  <b>Answer:</b>  b. (Both Datagram Socket & Datagram Packet)	L1	CLO2	422
32.	What happens if ServerSocket is not able to listen on the specified port? a) The system exits gracefully with appropriate message b) The system will wait till port is free c) IOException is thrown when opening the socket d) PortOccupiedException is thrown  <b>Answer:</b>  c. (IOException is thrown when opening the socket)	L2	CLO2	428
33.	What does bind() method of ServerSocket offer? a) binds the serversocket to a specific address (IP Address and port) b) binds the server and client browser c) binds the server socket to the JVM d) binds the port to the JVM  <b>Answer:</b>  a. (binds the serversocket to a specific address (IP Address and port))	L2	CLO2	421
34.	What does local IP address start with? a) 10.X.X.X b) 172.X.X.X c) 192.168.X.X d) 10.X.X.X, 172.X.X.X, or 192.168.X.X  <b>Answer:</b>  d. (10.X.X.X, 172.X.X.X, or 192.168.X.X)	L1	CLO2	418
35.	What happens if IP Address of host cannot be determined? a) The system exit with no message b) UnknownHostException is thrown c) IOException is thrown d) Temporary IP Address is assigned  <b>Answer:</b>  b. (UnknownHostException is thrown)	L1	CLO2	423
36.	What is the java method for ping? a) hostReachable() b) ping() c) isReachable()	L1	CLO2	420

	d) portBusy() <b>Answer:</b> c. (isReachable())			
37.	Which one of the following Socket API funtions convert an unconnected active tcp socket into a passive socket a)coonect b)bind c)listen d)accept <b>Answer:</b> c. (listen)	L1	CLO2	436
38.	Stream Control Transmission Protocol (SCTP) is a new a)Message oriented transport layer protocol b)connectionless oriented protocol c)connection oriented protocol d)stream oriented protocol <b>Answer:</b> a. (Message oriented transport layer protocol)	L1	CLO2	506
39.	In Transmission control protocol(TCP)each connection have a) 1 Stream b) 2 Streams c) 3 Streams d) Infinite Streams <b>Answer:</b> b. (2 Streams)	L1	CLO2	445
40.	How does applet and servlet communicate? a) HTTP b) HTTPS c) FTP d) HTTP Tunneling <b>Answer:</b> d. (HTTP Tunneling)	L1	CLO2	486
41.	The local host and the remote host are defined using IP addresses.To define the processes we need second identifiers called	L1	CLO2	480

	a) UDP addresses b) Transport addresses c) Port addresses d) IP addresses <b>Answer:</b> c. (Port addresses)			
42.	A port address in UDP is ----- bits long a) 8 b) 16 c) 32 d) 64 <b>Answer:</b> b. (16)	L1	CLO2	427
43.	The Combination of an IP Address and port number is called a----- a) Transport address b) Network address c) Socket address d) IP address <b>Answer:</b> c. (Socket address)	L1	CLO2	450
44.	TCP allows the sending process to deliver data as a----- of bytes and allows the receiving process to obtain data as a ----- of bytes. a) Message;Message b)Stream;Stream c) Block;Block d) Packet;Packet <b>Answer:</b> b. (Stream;Stream)	L2	CLO2	490
45.	The value of the window size is determined by ----- a) the sender b) the receiver c) both sender and receiver	L1	CLO2	492

	d) intermediary  <b>Answer:</b>  b. (the receiver)			
46.	IP is responsible for -----communication while TCP is responsible for ----- communication  a) host-to-host;process to process b) process to process; host-to-host c) process to process; network-to-network d) network-to-network; process to process  <b>Answer:</b>  a. (host-to-host;process to process)	L2	CLO2	438
47.	SCTP allows_____ service in each association  a) singestream b) multistream c) doblestream d) triple stream  <b>Answer:</b>  b. (multistream)	L1	CLO2	508
48.	TCP has-----,SCTP has-----  a)Packets;Segments b)Segments;Packets c)Segments;Frames d)Frames;Segments  <b>Answer:</b>  b. (Segments;Packets)	L1	CLO2	509
49.	A connection in SCTP is called an_____  a) negotiation b)association c)transmision d)segmentation  <b>Answer:</b>  b. (association )	L1	CLO2	507

50.	<p>In Inet Address class, which method returns the host name of the IP Address?</p> <ul style="list-style-type: none"><li>a) Public String get Hostname()</li><li>b) Public String getHostAddress()</li><li>c) Public static InetAddress get Localhost()</li><li>d) Public getByName()</li></ul> <p><b>Answer:</b></p> <p>b. (Public String get Hostname() )</p>	L2	CLO2	506
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**18CSC302J-COMPUTER NETWORKS**  
**QUESTION BANK**  
**UNIT-III**  
**(MULTIPLE CHOICE QUESTIONS)**

S.NO	QUESTION	BLOOMS LEVEL	CLO	PG.NO
1.	<p>The entire host name has a maximum of _____</p> <p>a) 255 characters</p> <p>b) 127 characters</p> <p>c) 63 characters</p> <p>d) 31 characters</p> <p><b>Answer:</b></p> <p>a. 255 characters</p>	1	1	583
2.	<p>The right to use a domain name is delegated by domain name</p> <p>a) internet society</p> <p>b) Internet architecture board</p> <p>c) internet research task force</p> <p>d) internet corporation for assigned names and numbers</p> <p><b>Answer:</b></p> <p>d. internet corporation for assigned names and numbers</p>	1	1	584
3.	<p>_____ is a form of nasty online attack in which a user gets redirects queries to a DNS because of override of system's TCP/IP settings.</p> <p>a) DNS mal functioning</p> <p>b) DNS cracking</p> <p>c) DNS redirecting</p> <p>d) DNS hijacking</p> <p><b>Answer:</b></p> <p>d. DNS hijacking</p>	1	1	584
4.	<p>A -----that maps each address to a unique name.</p>			584



	<ul style="list-style-type: none"> <li>a. name space</li> <li>b. address space</li> <li>c. memory space</li> <li>d. control space</li> </ul> <p><b>Answer:</b></p> <ul style="list-style-type: none"> <li>a. name space</li> </ul>			
5.	<p>What is the port no of dns?</p> <ul style="list-style-type: none"> <li>a)53</li> <li>b)443</li> <li>c) 80</li> <li>d)22</li> </ul> <p><b>Answer:</b></p> <ul style="list-style-type: none"> <li>a.53</li> </ul>	1	1	593
6.	<p>A -----is a domain name consisting of labels beginning with the host and going back through each level to the root node.</p> <ul style="list-style-type: none"> <li>a) FQDN</li> <li>b) PQDN</li> <li>c) SOA</li> <li>d) DDNS</li> </ul> <p><b>Answer:</b></p> <ul style="list-style-type: none"> <li>a. FQDN</li> </ul>	1		648
7.	<p>When the secondary downloads information from the primary, it is called -----</p> <ul style="list-style-type: none"> <li>a. Primary server</li> <li>b. zone transfer</li> <li>c. Secondary server</li> <li>d. Root server</li> </ul> <p><b>Answer:</b></p> <ul style="list-style-type: none"> <li><b>b.</b> zone transfer</li> </ul>	1	1	589
8.	<p>Each node in the tree has a -----</p>	1		587

	<p>c. Name space</p> <p>d. Domain name</p> <p>e. Label</p> <p>f. Address</p> <p><b>Answer:</b></p> <p>b. Domain name</p>			
9.	<p>Determine which of the following is an FQDN and which is a PQDN:</p> <p>a. xxx</p> <p>b. xxx.yyy.</p> <p>c. xxx.yyy.net</p> <p>d. zzz.yyy.xxx.edu</p> <p><b>Answer:</b></p> <p><b>d. zzz.yyy.xxx.edu</b></p>	2		648
10.	<p>Telnet protocol is used to establish a connection to _____</p> <p>a) TCP port number 21</p> <p>b) TCP port number 22</p> <p>c) TCP port number 23</p> <p>d) TCP port number 25</p> <p><b>Answer:</b></p> <p>c. TCP port number 23</p>	1	1	613
11.	<p>Absolute Telnet is a telnet client for _____ Operating system.</p> <p>a)windows</p> <p>b)linux</p> <p>c)mac</p> <p>d) ubuntu</p> <p><b>Answer:</b></p> <p>a. Windows</p>	1	1	614
12.	<p>The characters are sent to the TELNET client, which transforms the characters to a universal character set called -----characters and delivers them to the local TCP/IP stack.</p> <p>a) Network Virtual Terminal</p>	2		613

	b) Data Terminal c) Command line interface d) Remote flow control <b>Answer:</b> a. Network Virtual Terminal			
13.	What is the Configuration File of SSH Client? a. '/etc/ssh/ssh_config ' b. (Config-line) # transport input ssh c. '/ssh/ssh_config' d. (config)# hostname myswitch <b>Answer:</b> a. '/etc/ssh/ssh_config	2	1	622
14.	One of the interesting services provided by the SSH protocol is to provide ----- a. Port CONN b. port forwarding c. Port Triggering d. Port auth <b>Answer:</b> b. Port forwarding	1	1	628
15.	The well-known port ----- is used for the control connection and the well-known port ----- for the data connection. a. 21,20 b. 20,21 c. 20,20 d. 21,20 <b>Answer:</b> a. 21,20	1	1	631
16.	If 5 files are transferred from server A to client B in the same session. The number of TCP connection between A and B is:	1	1	635

	a. 5 b. 6 c. 10 d. 2 <b>Answer:</b> b. 6			
17.	These commands deliver information to the FTP user at the client site. a. STOR b. ALLO c. STAT d. Miscellaneous commands <b>Answer:</b> d.Miscellaneous commands	2	1	637
18.	The password is sent to the server using _____ command: a. PASSWD b. PASSWORD c. PASS d. PWD <b>Answer:</b> C. PASS	1	1	641
19.	Mode of data transfer in FTP, where all the is left to TCP: a. Stream mode b. Block mode c. Compressed mode d. Control mode <b>Answer:</b> a. Stream mode	1	1	642

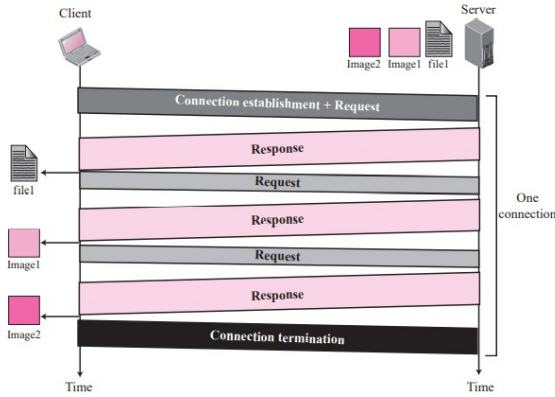
20.	<p>FTP server is-----</p> <ul style="list-style-type: none"> <li>a. Maintain state</li> <li>b. Is stateless</li> <li>c. Has single TCP connection for a file transfer</li> <li>d. Has multiple TCP connection for a file transfer</li> </ul> <p><b>Answer:</b></p> <ul style="list-style-type: none"> <li>a. Maintain state</li> </ul>	1	1	632
21.	<p>Which of the following is the port number for TFTP service?</p> <ul style="list-style-type: none"> <li>a)69</li> <li>b)70</li> <li>c)71</li> <li>d) 72</li> </ul> <p><b>Answer:</b></p> <p>a.69</p>	1	1	643
22.	<p>In TFTP, the ----- message is used by the client to establish a connection for writing data to the server.</p> <ul style="list-style-type: none"> <li>a. RRQ</li> <li>b. WRQ</li> <li>c. Mode</li> <li>d. Opcode</li> </ul> <p><b>Answer:</b></p> <ul style="list-style-type: none"> <li>b. WRQ</li> </ul>	2	1	643
23.	<p>The -----message is used by the client or the server when a connection cannot be established or when there is a problem during data transmission</p> <ul style="list-style-type: none"> <li>a. ERROR</li> </ul>	1	1	646

	b. READ c. WRITE d. UPDATE <b>Answer:</b> a. ERROR			
24.	The flow- and error-control mechanism in TFTP, it can lead to a problem known as the-----, named for the cartoon character who inadvertently conjures up a mop that continuously replicates itself. a. sorcerer's apprentice bug b. Symmetric c. Asymmetric d. Time out <b>Answer:</b> a. sorcerer's apprentice bug	2	1	649
25.	There are ----- types of TFTP messages. a. 5 b. 4 c. 6 d. 3 <b>Answer:</b> a. 5	1	1	653
26.	A new type of message, -----, to let the other party accept or reject the options, has also been proposed. a. ACK b. OACK c. OPEN MSG d. CLOSE MSG <b>Answer:</b>	2	1	651

	<b>b. OACK</b>			
27.	<p>Web page is a file consists of _____.</p> <p>a. Name</p> <p>b. Address</p> <p>c. MAC address</p> <p>d. Name and Address</p> <p><b>Answer:</b></p> <p>d. Name and Address</p>	1	1	637
27	<p>The structure of linked elements through which a user can navigate is called _____</p> <p>a. Hyperlinks</p> <p>b. Hypermedia</p> <p>c. Multimedia</p> <p>d. Audio, Video and Graphics</p> <p><b>Answer:</b></p> <p>b. Hypermedia</p>	1	1	658
28	<p>Which is a standard locator for specifying any kind of information on the Internet?</p> <p>a. Uniform Resource Locator</p> <p>b. Uniform Resource Location</p> <p>c. User Resource Locator</p> <p>d. User Resource Location</p> <p><b>Answer:</b></p> <p>a. Uniform Resource Locator</p>	2	1	659
29	<p>What is the static document?</p> <p>a. fixed-content document</p> <p>b. fixed-content documents that are created and stored in a client</p> <p>c. fixed-content documents that are created and stored in a server</p> <p>d. stored in a location</p>	1	1	660

	<b>Answer:</b> c. fixed-content documents that are created and stored in a server			
30	Which technology creates and handles the dynamic documents? a. Common Gateway Interface b. user Gateway Interface c. Java Applet d. User Interface <b>Answer:</b> a. Common Gateway Interface	2	1	661
31	To let client, know about type of document sent, a CGI program creates? a. Body b. Header c. Border d. footer <b>Answer:</b> b. Header	2	1	661
32	HTTP is _____ protocol. a. application layer b. transport layer c. network layer d. data link layer <b>Answer:</b> a. application layer	1	1	664
33	How many types of message formats are there in HTTP protocols? a. 4 b. 2 c. 3 d. 1	2	1	664



	<b>Answer:</b>  b. 2			
34	What is the default connection type used by the HTTP ?  a. Persistent b. Non-Persistent c. Can either persistent or non-persistent d. Both persistent and non-persistent  <b>Answer:</b> a. Persistent	2	1	711
35	What's the difference between persistent connection and non-persistent connection?  a. non-persistent HTTP 1.0 and persistent HTTP 1.1 b. non-persistent HTTP 1.1 and persistent HTTP 1.1 c. non-persistent HTTP 1.1 and persistent HTTP 1.0 d. non-persistent HTTP 1.0 and persistent HTTP 1.0  <b>Answer:</b> a. non-persistent HTTP 1.0 and persistent HTTP 1.1	2	1	671
36	 <p>What type of connection is mentioned in the given figure?</p> a. Non-Persistent connection b. Persistent connection	2	1	672

	c. UDP Connection d. TCP Connection <b>Answer:</b> b. Persistent connection			
37	A proxy server can act as _____ a. Client b. Server c. Both client and server d. Header <b>Answer:</b> c. Both client and server	1	1	675
38	A proxy server is used as the computer? a. with external access b. acting as a backup c. performing file handling d. accessing user permissions <b>Answer:</b> a. with external access	1	1	675
39	Which is a client/server protocol designed to provide the four pieces of information for a diskless computer or a computer that is booted for the first time. a. DHCP b. TCP c. UDP d. SMTP <b>Answer:</b> a. DHCP	2	1	570
40	The relay agent knows the _____ address of a DHCP server and listens for broadcast messages on port 67.	1	1	571

	a. Multicast b. MAC c. Unicast d. Broadcasting <b>Answer:</b> C. Unicast			
41	DHCP is used for a. IPV4 b. IPV6 c. IPV6 and IPV4 d. Not in IPV6 and in IPV4 <b>Answer:</b> c. IPV6 and IPV4	1	1	652
42	DHCP uses UDP Port _____ for sending data to the server a. 67 b. 68 c. 69 d. 70 <b>Answer:</b> a. 67	1	1	572
43	In DHCP, an Error control is accomplished through a. UDP uses the checksum b. uses timers and a retransmission policy c. check sum, timers and re-transmission policy d. Segments <b>Answer:</b> c. check sum, timers and re-transmission policy	1	1	573

44	<p>What are the types of modes available in POP3?</p> <p>a. Delete mode</p> <p>b. Insert mode</p> <p>c. Keep mode</p> <p>d. Delete and Keep Mode</p> <p><b>Answer:</b></p> <p>d. Delete and Keep Mode</p>	1	1	695
45	<p>How is the message sent from a PC2 when is first powers on and attempts to contact the DHCP Server?</p> <p>a. Layer 3 unicast</p> <p>b. Layer 3 broadcast</p> <p>c. Layer 3 multicast</p> <p>d. Without any Layer 3 encapsulation</p> <p><b>Answer:</b></p> <p>b. Layer 3 broadcast</p>	2	1	570
46	<p>How does a DHCP server dynamically assign IP address to host?</p> <p>a. Addresses are allocated after a negotiation between the server and the host to determine the length of the agreement.</p> <p>b. Addresses are assigned for a fixed period of time. At the end of period, a new quest for an address must be made, and another address is then assigned.</p> <p>c. Addresses are leased to host. A host will usually keep the same address by periodically contacting the DHCP sever to renew the lease.</p> <p>d. Addresses are permanently assigned so that the host uses the same address at all times.</p> <p><b>Answer:</b></p> <p>C. Addresses are leased to host. A host will usually keep the same address by periodically contacting the DHCP sever to renew the lease.</p>	2	1	570
47	<p>When the sender and the receiver of an email are on different systems, we need only _____</p> <p>a. One MTA</p> <p>b. Two UAs</p>	1	1	680

	c. Two UAs and one MTA d. Two UAs and two MTAs  <b>Answer:</b> d. Two UAs and two MTAs			
48	Which one of the following protocols is used to fetch mail from the mail box?  a. POP3 b. IMAP c. SMTP d. Telnet  <b>Answer:</b> a. POP3	1	1	694
49	Which is used by the client to check the status of the recipient?  a. NOP b. NOOP c. NO d. Quit  <b>Answer:</b> c. NOOP	1	1	689
50	Which format is used when the data must be interpreted as a sequence of 8-bit bytes?  a. PostScript b. Octet script c. Pre script d. Both Pre and Post Script  <b>Answer:</b> b. Octet script	2	1	698

UNIT-4  
IPV6 Addressing and Features

PART-A

MULTIPLE CHOICE QUESTIONS:

1. An IP V6 address is\_\_\_\_\_.
- 128 bits
  - 64 bits
  - 32 bits
  - 8 bits

ANSWER: a

2. To make addresses more readable, IPv6 specifies\_\_\_\_\_.
- colon hexadecimal notation
  - dotted decimal notation
  - hexa decimal notation
  - decimal notation

ANSWER: a

3. Two bytes in hexadecimal notation require \_\_\_\_\_ hexadecimal digits.
- 4
  - 3
  - 5
  - 6

ANSWER : a

4. Show the unabbreviated colon hex notation for the following IPv6 addresses:
- An address with 64 0s followed by 64 1s.
- 0000:0000:0000:0000:FFFF:FFFF:FFFF:FFFF
  - 0000:0000:0000:0000:0000:0000:0000:0000
  - FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF
  - AAAA:AAAA:AAAA:AAAA:AAAA:AAAA:AAAA:AAAA

ANSWER : a

5. Show the unabbreviated colon hex notation for the following IPv6 addresses:
- An address with 128 1s.
- 0000:0000:0000:0000:FFFF:FFFF:FFFF:FFFF
  - 0000:0000:0000:0000:0000:0000:0000:0000
  - FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF
  - AAAA:AAAA:AAAA:AAAA:AAAA:AAAA:AAAA:AAAA

ANSWER : c

6. Show abbreviations for the following address:
- 0000:0000:FFFF:0000:0000:0000:0000:0000
- 0:0:FFFF::
  - 1234:2346::1111
  - 0:1::1200:1000
  - ::FFFF:24.123.12.6

ANSWER : a

7. Find the interface identifier if the physical address in the EUI is (F5-A9-23-EF-07-14-7A-D2)<sub>16</sub> using the format we defined for Ethernet addresses.

- a. F7A9:23EF:0714:7AD2
- b. F7:A9:23:EF:07:14:7A:D2
- c. F:7A9:2:3EF:0:714:7:AD2
- d. F7:A9:23EF:07:14:7AD2

ANSWER: a

8. In an IPv6 header, the traffic class field is similar to which field in the IPv4 header?
- a) Fragmentation field
  - b) Fast switching
  - c) TOS field
  - d) Option field

ANSWER: c

9. IPv6 does not use \_\_\_\_\_ type of address.
- a. Broadcast
  - b. Multicast
  - c. Any cast
  - d. Unicast

ANSWER: a

10. What is disadvantage of NAT
- a. Conserves the legally registered addresses
  - b. Loss of end to end IP traceability
  - c. Eliminates address renumbering as network changes
  - d. None of above

ANSWER: b

11. Which term is not related to NAT
- a. inside local
  - b. outside local
  - c. inside global
  - d. external global

ANSWER: d

12. Meaning of Outside local
- a. Name of inside source address before translation
  - b. Name of destination host before translation
  - c. Name of inside host after translation
  - d. Name of outside destination host after translation

ANSWER: b

13. Which of the following is true when describing a multicast address?
- a. Packets addressed to a unicast address are delivered to a single interface.
  - b. Packets are delivered to all interfaces identified by the address. This is also called a one-to-many address.
  - c. Identifies multiple interfaces and is only delivered to one address. This address can also be called one-to-one-of-many.
  - d. These addresses are meant for nonrouting purposes, but they are almost globally unique so it is unlikely they will have an address overlap

ANSWER: b

14. Which of the following is true when describing a global unicast address?

- a. Packets addressed to a unicast address are delivered to a single interface.
- b. These are your typical publicly routable addresses, just like a regular publicly routable address in IPv4.
- c. These are like private addresses in IPv4 in that they are not meant to be routed.
- d. These addresses are meant for nonrouting purposes, but they are almost globally unique so it is unlikely they will have an address overlap.

ANSWER: b

15. Which of the following is true when describing a link-local address?

- a. Packets addressed to a unicast address are delivered to a single interface.
- b. These are your typical publicly routable addresses, just like a regular publicly routable address in IPv4.
- c. These are like private addresses in IPv4 in that they are not meant to be routed.
- d. These addresses are meant for nonrouting purposes, but they are almost globally unique so it is unlikely they will have an address overlap.

ANSWER: c

16. Which statement(s) about IPv4 and IPv6 addresses are true?

- a. An IPv6 address is 32 bits long, represented in hexadecimal.
- b. An IPv6 address is 128 bits long, represented in decimal.
- c. An IPv4 address is 32 bits long, represented in decimal.
- d. An IPv6 address is 128 bits long, represented in hexadecimal.

ANSWER: c

17. Which are considered the methods of NAT?

- 1. Static
  - 2. IP NAT pool
  - 3. Dynamic
  - 4. NAT double-translation
  - 5. Overload
- a. 1 and 6
  - b. 3 only
  - c. 1, 3 and 5
  - d. All of the above

ANSWER: c

18. An organization is assigned the block 2000:1456:2474/48. What is the CIDR notation for the blocks in the first and second subnets in this organization.

- a. 2000:1456:2474:0000/64 and 2000:1456:2474:0001/64
- b. 2000:1456:2474:0000/64 and 2000:1456:2474:0002/64
- c. 2000:1456:2474:0001/64 and 2000:1456:2474:0002/64
- d. 2000:1456:2474:0000/64 and 2000:1456:2474:0000/48

ANSWER: a

19. Assume a host with Ethernet address (**F5-A9-23-11-9B-E2**)16 has joined the network.

What would be its global unicast address if the global unicast prefix of the organization is 3A21:1216:2165 and the subnet identifier is A245:1232.

- a. ::F5A9:23FF:FE11:9BE2
- b. 3A21:1216:2165::F5A9:23FF:FE11:9BE2
- c. 3A21:1216:2165:A245:1232:F7A9:23FF:FE11:9BE2



d. 3A21:1216:2165:A245:1232:F5A9:23FF:FE11:9BE2

ANSWER: c

20. Assume a host with Ethernet address (F5-A9-23-11-9B-E2)<sub>16</sub> has joined the network.

What would be its link local address ?

- a. FE80::F7A9:23FF:FE11:9BE2
- b. FE10::F7A9:23FF:FE11:9BE2
- c. FE00::F7A9:23FF:FE11:9BE2
- d. FE80::F5A9:23FF:FE11:9BE2

ANSWER: a

PART-B ( 4 Marks EACH)

**1)An Internet Service Provider(ISP) has the following chunk of CIDR-based IP addresses available with it:245.248.128.0/20. The ISP wants to give half of this chunk of addresses to Organization A, and a quarter to Organization B, while retaining the remaining with itself. Which of the following is a valid allocation of addresses to A and B?**

- (A) 245.248.136.0/21 and 245.248.128.0/22
- (B) 245.248.128.0/21 and 245.248.128.0/22
- (C) 245.248.132.0/22 and 245.248.132.0/21
- (D) 245.248.136.0/22 and 245.248.132.0/21

Answer (A)

Since routing prefix is 20, the ISP has  $2^{(32-20)}$  or  $2^{12}$  addresses. Out of these  $2^{12}$  addresses, half (or  $2^{11}$ ) addresses have to be given to organization A and quarter ( $2^{10}$ ) addresses have to be given to organization B. So routing prefix for organization A will be 21. For B, it will be 22. If we see all options given in question, only options (A) and (B) are left as only these options have same number of routing prefixes. Now we need to choose from option (A) and (B). To assign addresses to organization A, ISP needs to take first 20 bits from 245.248.128.0 and fix the 21st bit as 0 or 1. Similarly, ISP needs to fix 21st and 22nd bits for organization B. If we take a closer look at the options (A) and (B), we can see the 21st and 22nd bits for organization B are considered as 0 in both options. So 21st bit of organization A must be 1. Now take the first 20 bits from 245.248.128.0 and 21st bit as 1, we get addresses for organization A as 245.248.136.0/21

**2) In the IPv4 addressing format, the number of networks allowed under Class C addresses is**

- (A)  $2^{14}$
- (B)  $2^7$
- (C)  $2^{21}$
- (D)  $2^{24}$

Answer

In class C, 8 bits are reserved for Host Id and 24 bits are reserved for Network Id. Out of these 24 Network Id bits, the leading 3 bits are fixed as 110. So remaining 21 bits can be used for different networks. See [this](#) for more details.

3) Which of the following is true when describing a multicast address?

- A** . Packets addressed to a unicast address are delivered to a single interface.
- B.** Packets are delivered to all interfaces identified by the address. This is also called a one-to-many address.
- C** . Identifies multiple interfaces and is only delivered to one address. This address can also be called one-to-one-of-many.
- D** . These addresses are meant for nonrouting purposes, but they are almost globally unique so it is unlikely they will have an address overlap.

**Answer:** Option **B**

**Explanation:**

Packets addressed to a multicast address are delivered to all interfaces identified by the multicast address, the same as in IPv4. It is also called a one-to-many address. You can always tell a multicast address in IPv6 because multicast addresses always start with *FF*.

4) Which of the following is true when describing a unicast address?

- A** . Packets addressed to a unicast address are delivered to a single interface.
- B.** These are your typical publicly routable addresses, just like a regular publicly routable address in IPv4.
- C** . These are like private addresses in IPv4 in that they are not meant to be routed.
- D** . These addresses are meant for nonrouting purposes, but they are almost globally unique so it is unlikely they will have an address overlap.

**Answer:** Option **A**

**Explanation:**

Packets addressed to a unicast address are delivered to a single interface. For load balancing, multiple interfaces can use the same address

5) Which of the following is true when describing a link-local address?

- A** . Packets addressed to a unicast address are delivered to a single interface.
- B.** These are your typical publicly routable addresses, just like a regular publicly routable address in IPv4.
- C** . These are like private addresses in IPv4 in that they are not meant to be routed.
- D** . These addresses are meant for nonrouting purposes, but they are almost globally unique so

- . it is unlikely they will have an address overlap.

**Answer:** Option C

**Explanation:**

Link-local addresses are meant for throwing together a temporary LAN for meetings or a small LAN that is not going to be routed but needs to share and access files and services locally.

6) Which of the following is true when describing a link-local address?

- A** . Packets addressed to a unicast address are delivered to a single interface.
- B.** These are your typical publicly routable addresses, just like a regular publicly routable address in IPv4.
- C** . These are like private addresses in IPv4 in that they are not meant to be routed.
- D** . These addresses are meant for nonrouting purposes, but they are almost globally unique so it is unlikely they will have an address overlap.

**Answer:** Option C

**Explanation:**

Link-local addresses are meant for throwing together a temporary LAN for meetings or a small LAN that is not going to be routed but needs to share and access files and services locally.

7) Which of the following is true when describing a link-local address?

- A** . Packets addressed to a unicast address are delivered to a single interface.
- B.** These are your typical publicly routable addresses, just like a regular publicly routable address in IPv4.
- C** . These are like private addresses in IPv4 in that they are not meant to be routed.
- D** . These addresses are meant for nonrouting purposes, but they are almost globally unique so it is unlikely they will have an address overlap.

**Answer:** Option C

**Explanation:**

Link-local addresses are meant for throwing together a temporary LAN for meetings or a small LAN that is not going to be routed but needs to share and access files and services locally.

8) Which of the following is true when describing a link-local address?

- A** . Packets addressed to a unicast address are delivered to a single interface.

- B.** These are your typical publicly routable addresses, just like a regular publicly routable address in IPv4.
- C** . These are like private addresses in IPv4 in that they are not meant to be routed.
- D** . These addresses are meant for nonrouting purposes, but they are almost globally unique so it is unlikely they will have an address overlap.

**Answer:** Option C

**Explanation:**

Link-local addresses are meant for throwing together a temporary LAN for meetings or a small LAN that is not going to be routed but needs to share and access files and services locally.

9) Which of the following is true when describing a link-local address?

- A** . Packets addressed to a unicast address are delivered to a single interface.
- B.** These are your typical publicly routable addresses, just like a regular publicly routable address in IPv4.
- C** . These are like private addresses in IPv4 in that they are not meant to be routed.
- D** . These addresses are meant for nonrouting purposes, but they are almost globally unique so it is unlikely they will have an address overlap.

**Answer:** Option C

**Explanation:**

Link-local addresses are meant for throwing together a temporary LAN for meetings or a small LAN that is not going to be routed but needs to share and access files and services locally.

10) Which of the following is true when describing a link-local address?

- A** . Packets addressed to a unicast address are delivered to a single interface.
- B.** These are your typical publicly routable addresses, just like a regular publicly routable address in IPv4.
- C** . These are like private addresses in IPv4 in that they are not meant to be routed.
- D** . These addresses are meant for nonrouting purposes, but they are almost globally unique so it is unlikely they will have an address overlap.

**Answer:** Option C

**Explanation:**

Link-local addresses are meant for throwing together a temporary LAN for meetings or a small

LAN that is not going to be routed but needs to share and access files and services locally.

PART-C (12 Marks)

1a) Which of the following is true when describing a link-local address?

- A** . Packets addressed to a unicast address are delivered to a single interface.
- B.** These are your typical publicly routable addresses, just like a regular publicly routable address in IPv4.
- C** . These are like private addresses in IPv4 in that they are not meant to be routed.
- D** . These addresses are meant for nonrouting purposes, but they are almost globally unique so it is unlikely they will have an address overlap.

**Answer:** Option C

**Explanation:**

Link-local addresses are meant for throwing together a temporary LAN for meetings or a small LAN that is not going to be routed but needs to share and access files and services locally.

1b)

Which of the following is true when describing a link-local address?

- A** . Packets addressed to a unicast address are delivered to a single interface.
- B.** These are your typical publicly routable addresses, just like a regular publicly routable address in IPv4.
- C** . These are like private addresses in IPv4 in that they are not meant to be routed.
- D** . These addresses are meant for nonrouting purposes, but they are almost globally unique so it is unlikely they will have an address overlap.

**Answer:** Option C

**Explanation:**

Link-local addresses are meant for throwing together a temporary LAN for meetings or a small LAN that is not going to be routed but needs to share and access files and services locally.

1c) Dynamic NAT \_\_\_\_\_.

- A.** always maps a private IP address to a public IP address

**B.** provides an automated mapping of inside local to inside global IP addresses

**C.** provides a mapping of internal host names to IP addresses

**D. dynamically provides IP addressing to internal hosts**

2a) What is the LLMNR multicast destination addresses for IPv6?

A. fe80::01

B. ff00:ffff

C. ffff::0001

**D. ff01::3:1**

2b) What is the LLMNR multicast destination address for IPv4?

**A. 224.0.0.252**

B. 255.0.0.127

C. 127.0.0.255

D. 255.255.255.255

2c) What will happen if you disable IPv6?

A. There will be no effect to the local network.

B. The amount of network traffic will increase.

**C. Network Discovery will stop working.**

D. You cannot disable IPv6.

3a) In IPv4, what is the length of 12 and total length value

A. 39,988

B. 40,012

C. 40,048

**D. 39,952**

3b) In IPv4, what is the value header is 28 bytes and the data field of 400 bytes?

**A. 428**

B. 407

C. 107

D. 427

3c) In IPv4, if the fragment offset has a value 100 its means? \_\_\_\_\_

- A. the datagram has not been fragmented
- B. the datagram is 100 bytes in size
- C. the first byte of the datagram is byte 100
- D. the first byte of the datagram is byte 800**

4a. In IPv4, an HLEN value

- A. there are 10 bytes of options
- B. there are 40 bytes of options
- C. there are 40 bytes in the header**
- D. none of the above

4b). In IPv4, which field datagram as a fragment?

- A. Do not fragment bit ? 0
- B. More Fragment bit ? 0

**C. Fragment offset = 1000**

D. none of the above

4c). The IPv4 header size

- A. is 20 to 60 bytes long**
- B. is 20 bytes long
- C. is 60 bytes long
- D. none of the above

5a). In IPv4, when a datagram size of the datagram must

- A. MTU
- B. MAT
- C. MTU**
- D. none of the above

5b) You want to ping the loopback address of your local host (with IPv6). What will you type?

**A** *ping 127.0.0.1*

.

**B.** *ping 0.0.0.0*

**C**  
.  
*ping ::1*

**D**  
.  
*trace 0.0.::1*

**Answer:** Option **C**

**Explanation:**

The loopback address with IPv4 is *127.0.0.1*. With IPv6, that address is *::1*.

5c) Which statement(s) about IPv6 addresses are true?

1. Leading zeros are required.
2. Two colons (::) are used to represent successive hexadecimal fields of zeros.
3. Two colons (::) are used to separate fields.
4. A single interface will have multiple IPv6 addresses of different types.

**A**  
.  
1 and 3

**B.** 2 and 4

**C**  
.  
1, 3 and 4

**D**  
.  
All of the above

**Answer:** Option **B**

**Explanation:**

In order to shorten the written length of an IPv6 address, successive fields of zeros may be replaced by double colons. In trying to shorten the address further, leading zeros may also be removed. Just as with IPv4, a single device's interface can have more than one address; with IPv6 there are more types of addresses and the same rule applies. There can be link-local, global unicast, and multicast addresses all assigned to the same interface.

6a) Which command will show you all the translations active on your router

- A. show ip nat translations**
- B.** show ip nat statistics
- C.** debug ip nat
- D.** clear ip nat translations

6b) Which command would you place on the interface on a private network

- A. ip nat inside**
- B.** ip nat outside



C. ip outside global

D. ip inside local

6c) Meaning of Outside local

A. Name of inside source address before translation

**B. Name of destination host before translation**

C. Name of inside host after translation

D. Name of outside destination host after translation

**18CSC4302J-COMPUTER NERKS**  
**QUESTION BANK**  
**UNIT-V**  
**(MULTIPLE CHOICE QUESTIONS)**

S.NO	QUESTION	BLOOMS LEVEL	CLO	PG. NO
1.	. ATM and frame relay are _____ a) virtual circuit networks b) datagram networks c) virtual private networks d) virtual public networks			
2.	ATM uses _____ a) asynchronous frequency division multiplexing b) asynchronous time division multiplexing c) asynchronous space division multiplexing d) asynchronous amplitude division multiplexing			
3.	ATM standard defines _____ layers. a) 2 b) 3 c) 4 d) 5			
4.	ATM can be used for _____ a) local area network b) wide area network c) campus area network d) networks covering any range		1	
5.	Frame relay has error detection at the _____ a) physical layer b) data link layer c) network layer d) transport layer		1	
6.	Virtual circuit identifier in frame relay is called _____ a) data link connection identifier b) frame relay identifier c) cell relay identifier d) circuit connection identifier		1	
7.	Frame relay has _____ a) only physical layer		1	

	b) only data link layer c) only network layer d) both physical and data link layer			
8.	In frame relay networks, extended address is used _____ a) to increase the range of data link connection identifiers b) for error detection c) for encryption d) for error recovery		1	
9.	What is FRAD in frame relay network? a) FRAD assembles and disassembles the frames coming from other protocols b) FRAD is used for modulation and demodulation c) FRAD is used for error detection d) FRAD is used for error recovery		1	
10.	Automatic repeat request error management mechanism is provided by _____  a. logical link control sub layer b. media access control sub layer c. network interface control sub layer d. application access control sub layer		1	
11.	Which sub layer of the data link layer performs data link functions that depend upon the type of medium? a. logical link control sublayer b. media access control sublayer c. network interface control sublayer d. error control sublayer		1	
12.	When 2 or more bits in a data unit has been changed during the transmission, the error is called _____ a. random error b. burst error c. inverted error d. double error		1	
13.	Which type of Sframe in HDLC exhibit the correspondence of last three bits [N(R)] by defining the negative acknowledgement (NAK) number with the code value of '01'? a. Receive ready b. Receive not ready c. Reject d. Selective Reject		1	

14.	Which operational mode/s of HDLC support/s the balanced configuration by governing point to point link connectivity in addition to the primary as well as secondary functions performed by the station? a. NRM <b>b. ABM</b> c. NRM & ABM d. ARP		1	
15.	The program used to determine the round trip delay between a workstation and a destination address is a. Tracert <b>b. Traceroute</b> c. Ping d. Pop		1	
16.	Home broadband connections that work on DSL (Digital Subscriber Line) use ___ protocol  A) PPPoE (PPP over Ethernet) B) PPPoA (PPP over ATM) C) Bridge protocol <b>D) PPPoA,PPPoE&amp; Bridge protocol</b>		1	
17.	In the Internet Protocol Control Protocol, The code value of 0x04 is used to represent the packet of  A) Configure request <b>B) Configure reject</b> C) Terminate request D) Code reject		1	
18.	The link Control protocol packet that refers to accept the shutdown request has used the code of  A)0?0a B)0?0b <b>C)0?06</b> D)0?07		1	
19.	Point to point protocol(PPP) is a byte oriented protocol using byte stuffing with the escape byte		1	

	<p>A)1111101</p> <p>B)11001101</p> <p>C)1011101</p> <p>D)11101</p>			
20.	<p>The link Control Protocol(LCP) is responsible for establishing, maintaining, Configuring and</p> <p>A) Unidirectional link</p> <p>B) Terminating link</p> <p>C) Network</p> <p>D) Multipoint link</p>		1	
21.	<p>Internet users use the</p> <p>A)High-level data link Control</p> <p>B)password authentication protocol</p> <p>C) Multipoint protocol</p> <p>D)Point to point protocol</p>		1	
22.	<p>In _____, the configuration is balanced. The link is point-to-point, and each station can function as a primary and a secondary.</p> <p>A)ARM</p> <p>B)ABM</p> <p>C)NBM</p> <p>D)NRM</p>		1	
23.	<p>In _____, the station configuration is unbalanced. We have one primary station and multiple secondary stations.</p> <p>A)ARM</p> <p>B)ABM</p> <p>C)NBM</p>		1	

	D)NRM			
24.	<p>In PPP, the _____ is responsible for establishing, maintaining, configuring, and terminating links.</p> <p>a.NCP</p> <p><b>b.LCP</b></p> <p>c.CHAP</p> <p>d.PAP</p>		1	
25.	<p>In PPP, _____ is a simple authentication procedure with a two-step process.</p> <p>a.NCP</p> <p>b.LCP</p> <p>c.CHAP</p> <p><b>d.PAP</b></p>		1	
26.	<p>Frame relay has error detection at the _____</p> <p>A.Physical layer</p> <p><b>B&gt;Data link layer</b></p> <p>C)Network layer</p> <p>D) Transport Layer</p>		1	
27.	<p>Which sub-layer of the data link layer performs data link functions that depend upon the type of medium?</p> <p>A.Logical Link Control Sub Layer</p> <p><b>B.Media Access Control Sub Layer</b></p> <p>C.Network Interface Control Sub Layer</p> <p>D.Application Access Control Sub Layer</p>		1	
28.	<p>Which Of The Following Describes The Creation Of Private Networks Across The Internet, Enabling Privacy And Tunneling Of Non-TCP/IP Protocols?</p> <p>A.HDLC</p>		1	

	B.Cable <b>C.VPN</b> D.Ipsec			
29.	Home Broadband Connections That Work On DSL (Digital Subscriber Line) Use ____ Protocol  A.Pppoe (PPP Over Ethernet) B.Pppoa (PPP Over ATM) C. Bridge Protocol <b>D.Pppoa,Pppoe&amp; Bridge Protocol</b>		1	
30.	Virtual Circuit Identifier In Frame Relay Is Called _____ <b>A. Data Link Connection Identifier</b> B. Frame Relay Identifier C. Cell Relay Identifier D. Circuit Connection Identifier		1	
31.	Radio Channels Are Attractive Medium Because ____  A) Immune electromagnetic interference <b>B) Connectivity Can Be Given To Mobile User</b> C) Can Carry Signals D) Less Frequency		1	
32.	An ATM Cell Has The Payload Field Of ____  A) 32 Bytes <b>B) 48 Bytes</b> C) 64 Bytes D) 128 Bytes		1	
33.	Which Of The Following Factors Affect Transmission Rate In DSL?  A) The Gauge Of The Twisted-Pair Line B) Degree Of Electrical Interference C) Shadow Fading		1	

	<b>D) The Gauge Of The Twisted-Pair Line And Degree Of Electrical Interference</b>			
34.	Which Of The Following Statements Is Not Applicable For Cable Internet Access?  A) It Is A Shared Broadcast Medium  B) It Includes Hfcs  C) Cable Modem Connects Home PC To Ethernet Port  <b>D) Analog Signal Is Converted To Digital Signal In DSLAM</b>		1	
35.	DSL Telcos Provide Which Of The Following Services?  A) Wired Phone Access  B) ISP  <b>C) Wired Phone Access And ISP</b>  D) Network Routing And ISP		1	
36.	Internet Access By Transmitting Digital Data Over The Wires Of A Local Telephone Network Is Provided By ____  A) Leased Line  <b>B) Digital Subscriber Line</b>  C) Digital Signal Line  D) Digital Leased Line		1	
37.	There Are ____ Total Features Of Frame Relay.  A) Five  B) Seven  <b>C) Nine</b>  D) Ten		1	
38.	Frame Relay Does Not Provide Flow Or Error Control, They Must Be Provided By The ____  A) Lower Level Protocol		1	



	B) Highest Level Protocol <b>C) Upper Level Protocol</b> D) Lowest Level Protocol			
39.	Fiber Optics Posses Following Properties ____ <b>A) Immune Electromagnetic Interference</b> B) Very High Signal Attenuation C) Eassy To Tap D) Very less To Tap		1	
40.	Terrestrial radio channels are broadly classified into ____ groups. A) 2s <b>B) 3</b> C) 4 D) 1		1	
41.	To Handle Frames Arriving From Other Protocols, Frame Relay Uses A Device Called A ____. A) MUX B) VOFR <b>C) FRAD</b> D) MOV		1	
42.	In ATM, The ____ Layer Defines The Transmission Medium, Bit Transmission, Encoding, And Electrical-To-Optical Transformation. A) AAL <b>B) Physical</b> C) ATM Layer D) Network		1	
43.	In A ____ ATM LAN, The Backbone That Connects Traditional Lans Uses ATM Technology.		1	

	<p><b>A) Legacy</b></p> <p>B) Pure</p> <p>C) Mixed Architecture</p> <p>D) Automatic</p>			
44.	<p>This Type Of DSL Is Used For Wideband Digital Transmission Within A Corporate Site And Between The Telephone Company And A Customer.It Is Symmetrical, Meaning That An Equal Amount Of Bandwidth Is Available In Both Directions.</p> <p>A. BAL</p> <p><b>B. High Bit-Rate DSL</b></p> <p>C. Vbns</p> <p>D. Wideband Code-Division Multiple Access</p>		1	
45.	<p>This Device Divides The Incoming Signal Into Low Frequencies To Send To Voice Devices, And High Frequencies For Data To The Computer.</p> <p>A. Multicast Router</p> <p>B. Interface Device</p> <p>C. Sequencer</p> <p><b>D. Splitter</b></p>		1	
46.	<p>This Is A Network Device, Usually At A Telephone Company Centraloffice, That Receives Signals From Multiple Customer DSL Connections And Puts The Signals On A High-Speed Backbone Line.</p> <p>A. Mbone</p> <p>B. Repeater</p> <p>C. Hub</p> <p><b>D. DSLAM</b></p>		1	
47.	<p>The Twisted Pair Cable In Which Metal Casing Improves The Penetration Of Noise Or Crosstalk Is Called____</p>		1	

	<p>A. Insulated Twisted Pair Cable</p> <p><b>B. Shielded Twisted Pair Cable</b></p> <p>C. Unshielded Twisted Pair Cable</p> <p>D. Both And B</p>			
48.	<p>____ Provides An Isolated Tunnel Across A Public Network For Sending And Receiving Data Privately As If The Computing Devices Were Directly Connected To The Private Network.</p> <p>A) Visual Private Network</p> <p>B) Virtual Protocol Network</p> <p>C) Virtual Protocol Networking</p> <p><b>D) Virtual Private Network</b></p>		1	
49.	<p>Site-To-Site Vpns Are Also Known As ____</p> <p>A) Switch-To-Switch Vpns</p> <p>B) Peer-To-Peer Vpns</p> <p>C) Point-To-Point Vpns</p> <p><b>D) Router-To-Router Vpns</b></p>		1	
50.	<p>In Frame Relay, an address can be _____ bytes.</p> <p>A. only 2</p> <p>B. 2 to 3</p> <p><b>C. 2 to 4</b></p> <p>D. 2 to 5</p>		1	