

Started on Friday, 22 December 2023, 9:00 AM

State Finished

Completed on Friday, 22 December 2023, 10:36 AM

Time taken 1 hour 36 mins

Grade **81.00** out of 100.00

Question **1**

Complete

Mark 1.00 out of 1.00

Which layer is responsible for the process to process delivery in a general network model?

- ☐ a. session layer
- ☐ b. network layer
- ☐ c. data link layer
- ☒ d. transport layer

The correct answer is:
transport layer

Question **2**

Complete

Mark 0.00 out of 1.00

How are MAC addresses learned and associated with the port?

- ☐ Source interface learning
- ☒ Destination MAC address learning
- ☐ Destination interface learning
- ☐ Source MAC address learning

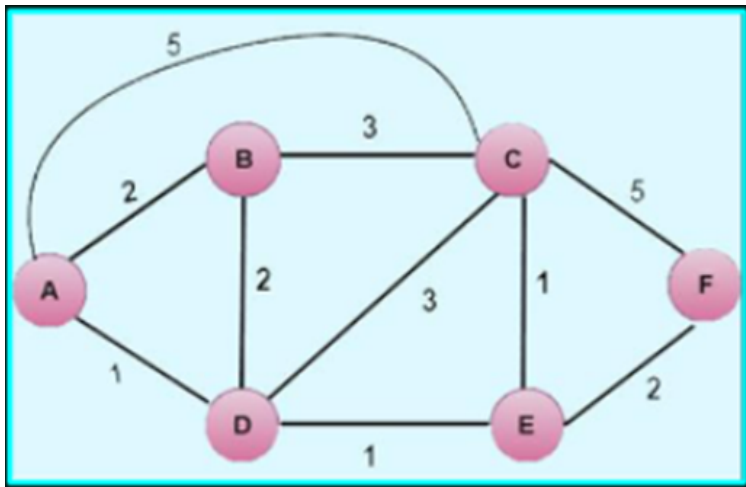
The correct answer is:
Source MAC address learning

Question **3**

Complete

Mark 0.00 out of 1.00

Find the shortest path routing using open shortest path first (OSPF) algorithm for the following network graph. Start from node **A**.



- ☒ a. None of these
- ☐ b. (A,0,-) (B,2,B or D), (C,3,D or E), (D,1,D), (E,2,D), (F,4,D or E)
- ☐ c. (A,0,-) (B,3,C or E), (C,3,B or F), (D,1,D), (E,2,D), (F,4,F)
- ☐ d. (A,0,-) (B,2,B), (C,5,F), (D,2,B), (E,2,D), (F,2,E)

The correct answer is:

(A,0,-) (B,2,B or D), (C,3,D or E), (D,1,D), (E,2,D), (F,4,D or E)

Question **4**

Complete

Mark 1.00 out of 1.00

What is the Hexadecimal equivalent of the following Ethernet address

010110100001000101010101000110001010101000001111

- ☐ a. 5A115514AA0F
- ☐ b. None of these
- ☐ c. 5A1155189A0E
- ☒ d. 5A115518AA0F

The correct answer is:

5A115518AA0F

Question **5**

Complete

Mark 1.00 out of 1.00

The transport layer protocols used for real time multimedia, file transfer, DNS, and email respectively are

- ☐ a. TCP, UDP, UDP and TCP
- ☐ b. UDP, TCP, TCP and UDP
- ☐ c. TCP, UDP, TCP and UDP
- ☒ d. UDP, TCP, UDP and TCP

The correct answer is:

UDP, TCP, UDP and TCP

Question **6**

Complete

Mark 0.00 out of 1.00

Transport layer deals with.....communication.

- ☐ a. application-to-application
- ☒ b. node-to-node
- ☐ c. process-to-process
- ☐ d. person-to-person

The correct answer is:

process-to-process

Question **7**

Complete

Mark 1.00 out of 1.00

What are not the responsibilities of the Data link Layer?

- ☒ a. IP addressing
- ☐ b. MAC addressing
- ☐ c. Framing
- ☐ d. Error detection

The correct answer is:
IP addressing

Question **8**

Complete

Mark 1.00 out of 1.00

An organization is granted the block 130.34.12.64/26. Find the maximum number of host addresses that can be assigned for this network?

- ☐ a. 18
- ☐ b. 32
- ☐ c. 256
- ☒ d. None of these

The correct answer is:
None of these

Question **9**

Complete

Mark 1.00 out of 1.00

Which one of the following is the start frame delimiter (SFD) flag in Ethernet frame

- ☐ a. 00000000
- ☒ b. 10101011
- ☐ c. 11111111
- ☐ d. 10101010

The correct answer is:

10101011

Question **10**

Complete

Mark 1.00 out of 1.00

The Dynamic Host Configuration Protocol server.....

- ☐ a. grants an IP address when a client requests.
- ☐ b. maintains the information about client configuration parameters.
- ☒ c. All of these
- ☐ d. maintains a pool of available IP addresses.

The correct answer is:

All of these

Question **11**

Complete

Mark 1.00 out of 1.00

To avoid collisions on wireless networks, _____ was invented.

- ☐ a. None of these
- ☐ b. Ethernet
- ☐ c. CSMA/CD
- ☒ d. CSMA/CA

The correct answer is:

CSMA/CA

Question **12**

Complete

Mark 1.00 out of 1.00

Which one of the following is TRUE about- routing information protocol (RIP) and open shortest path first (OSPF) protocol?

- ☐ a. Both RIP and OSPF use distance vector routing
- ☒ b. RIP uses distance vector routing and OSPF use link state routing
- ☐ c. Both RIP and OSPF use link state routing
- ☐ d. OSPF uses distance vector routing and RIP use link state routing

The correct answer is:

RIP uses distance vector routing and OSPF use link state routing

Question **13**

Complete

Mark 1.00 out of 1.00

Dynamic Host Configuration Protocol is used for

- ☐ a. None of these
- ☐ b. IPV6
- ☐ c. IPV4
- ☒ d. both IPV4 and IPV6

The correct answer is:

both IPV4 and IPV6

Question **14**

Complete

Mark 1.00 out of 1.00

In Carrier Sense Multiple Access which node senses the channel, if idle it sends the data, otherwise it checks the medium after a random amount of time (not continuously) and transmits when found idle.

- ☐ a. 1-persistent
- ☒ b. Non-persistent
- ☐ c. O-persistent
- ☐ d. P-persistent

The correct answer is:

Non-persistent

Question **15**

Complete

Mark 1.00 out of 1.00

Which of the following is not a limitation of IPV4 addresses?

- ☐ a. IPV4 lacks end-to-end connectivity
- ☐ b. IPV4 suffers from IP address depletion
- ☐ c. IPV4 cannot handle internet routing table expansion
- ☒ d. IPV4 fits for small topology drawing

The correct answer is:

IPV4 fits for small topology drawing

Question **16**

Complete

Mark 1.00 out of 1.00

Station A uses 45 byte packets to transmit messages to Station B using a sliding window protocol. The round trip time delay between A and B is 60ms and the bottleneck bandwidth on the path A and B is 120kbps. What is the optimal window size that A should use?

- ☐ a. 20
- ☐ b. 31
- ☒ c. 21
- ☐ d. None of these

The correct answer is:

21

Question **17**

Complete

Mark 1.00 out of 1.00

In which type of applications is UDP commonly used due to its characteristics?

- ☐ a. File transfer
- ☐ b. Email communication
- ☐ c. Web browsing
- ☒ d. Real-time streaming and online gaming

The correct answer is:

Real-time streaming and online gaming

Question **18**

Complete

Mark 1.00 out of 1.00

Which is of the following statement is incorrect,

A shared broadcast media of transmission bandwidth 20 Mbps is shared by 100 users then,

- ☐ a. Using CDMA scheme, each of the users have an access to 20 Mbps of bandwidth
- ☐ b. Using TDMA scheme, each of the users have an access to 200 Kbps of bandwidth
- ☒ c. Using CDMA scheme, each of the users have an access to 200 Kbps of bandwidth
- ☐ d. Using FDMA scheme, each of the users have an access to 200 Kbps of bandwidth

The correct answer is:

Using CDMA scheme, each of the users have an access to 200 Kbps of bandwidth

Question **19**

Complete

Mark 1.00 out of 1.00

Routing inside a single administrative domain is called as..... routing.

- ☐ a. None of these
- ☐ b. Path Vector
- ☒ c. Intra-domain
- ☐ d. Inter-domain

The correct answer is:

Intra-domain

Question **20**

Complete

Mark 1.00 out of 1.00

Consider three devices A, B, and C with IP addresses 10.105.1.30, 10.105.1.33 and 10.105.1.34 respectively. The subnet mask is set to 255.255.255.224 for all the three devices. Which one of the following is true?

- ☐ a. Only A and B belong to same subnet
- ☒ b. only B and C belongs to same subnet
- ☐ c. A, B, and C all belongs to three different subnets
- ☐ d. A, B, and C all belongs to the same subnet

The correct answer is:

only B and C belongs to same subnet

Question **21**

Complete

Mark 1.00 out of 1.00

An organization follows class B for their internal network. One of the host in the organization has an IP address 162.198.20.1. What will be the number of possible network addresses and host addresses? What will the broadcast address of the network?

- ☐ a. Network addresses 16384, Host addresses 65536, Broadcast address 162.255.255.255
- ☒ b. Network addresses 16384, Host addresses 65534, Broadcast address 162.255.255.255
- ☐ c. Network addresses 16384, Host addresses 65534, Broadcast address 255.255.255.255
- ☐ d. Network addresses 65536, Host addresses 65534, Broadcast address 255.255.255.255

The correct answer is:

Network addresses 16384, Host addresses 65534, Broadcast address 162.255.255.255

Question **22**

Complete

Mark 0.00 out of 1.00

What is the role of logical link control sublayer in layer 2?

- ☒ a. Connection Establishment
- ☐ b. Error detection
- ☐ c. Acknowledgment
- ☐ d. Sequencing

The correct answer is:
Error detection

Question **23**

Complete

Mark 1.00 out of 1.00

Suppose a packet of length 512 bits travels from one router **R1** to another router **R2** located at 200 kms distance through Ethernet cable. The transmission rate of the cable is 200 bps and the propagation speed of the cable is 20 kms/min. Then the propagation and transmission delay of the packet to reaches from **R1** to **R2** is

- ☒ a. 600 secs, 2.56 secs
- ☐ b. 600 secs, 10 secs
- ☐ c. 1200 secs, 2.56 secs
- ☐ d. 1200 secs, 10 secs

The correct answer is:
600 secs, 2.56 secs

Question **24**

Complete

Mark 1.00 out of 1.00

What information is typically included in each entry of the MAC address table?

- ☒ a. MAC address and Port Number
- ☐ b. IP address and subnet mask
- ☐ c. MAC address and IP address
- ☐ d. Frame size and type

The correct answer is:

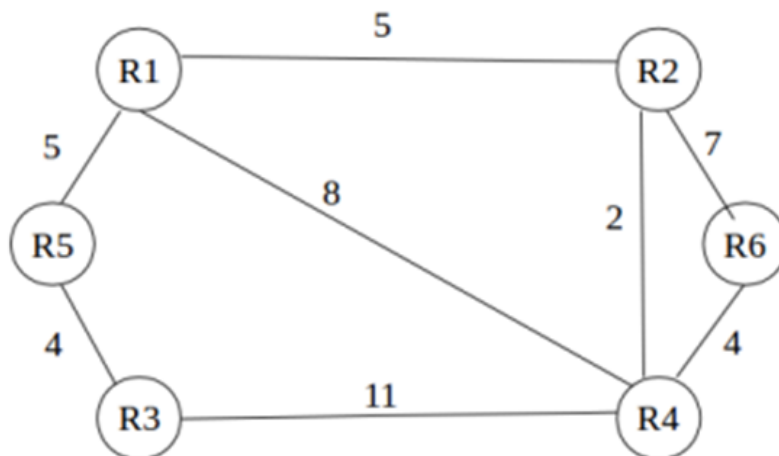
MAC address and Port Number

Question **25**

Complete

Mark 1.00 out of 1.00

Explain the distance vector routing algorithm by running it for the following graph. Calculate the shortest distance from source R5 to destination R4.



- ☒ a. 12
- ☐ b. 11
- ☐ c. 10
- ☐ d. None of these

The correct answer is:

12

Question **26**

Complete

Mark 1.00 out of 1.00

What is default subnet mask address of this IPV4 address **11011111 11110111 11000111 00011101**?

- ☐ a. 255.255.255.255
- ☐ b. 255.0.0.0
- ☒ c. 255.255.255.0
- ☐ d. 255.255.0.0

The correct answer is:
255.255.255.0

Question **27**

Complete

Mark 1.00 out of 1.00

..... is an inter-domain routing protocol using path vector routing.

- ☐ a. RIP
- ☐ b. EIGRP
- ☐ c. OSPF
- ☒ d. BGP

The correct answer is:
BGP

Question **28**

Complete

Mark 1.00 out of 1.00

What is the purpose of MAC address learning in network switches?

- ☐ a. To power on and restart the switch
- ☐ b. To initiate frame forwarding
- ☐ c. To flood frames throughout the network
- ☒ d. To build and maintain a MAC address table

The correct answer is:

To build and maintain a MAC address table

Question **29**

Complete

Mark 1.00 out of 1.00

A shared broadcast medium of transmission rate 5 Mbps is being shared by 10 users (U1, U2, ..., U10). Calculate the maximum transmission rate of each of the users if the channel access scheme used is FDMA. If instead of FDMA the scheme being used is CDMA then what will be the maximum transmission rate of each of the users?

- ☐ a. None of these
- ☒ b. 500 Kbps, 5000 Kbps
- ☐ c. 50 Mbps, 5 Mbps
- ☐ d. 5000 Kbps, 5000 Kbps

The correct answer is:

500 Kbps, 5000 Kbps

Question **30**

Complete

Mark 1.00 out of 1.00

An organization is granted the block **130.34.12.64/30**. Find the maximum number of host addresses that can be assigned for this network?

- ☐ a. None of these
- ☒ b. 2
- ☐ c. 8
- ☐ d. 4

The correct answer is:

2

Question **31**

Complete

Mark 1.00 out of 1.00

Which of the following is true for Address Resolution Protocol (ARP)?

- ☒ a. ARP request is broadcast and ARP reply is unicast.
- ☐ b. ARP request is unicast and ARP reply is broadcast.
- ☐ c. ARP request is unicast and ARP reply is also unicast.
- ☐ d. ARP request is broadcast and ARP reply is also broadcast.

The correct answer is:

ARP request is broadcast and ARP reply is unicast.

Question **32**

Complete

Mark 1.00 out of 1.00

Which of the following routing algorithms can be used for network layer design?

- ☐ a. link state routing
- ☒ b. All of these
- ☐ c. shortest path algorithm
- ☐ d. distance vector routing

The correct answer is:

All of these

Question **33**

Complete

Mark 1.00 out of 1.00

The header length of IPV6 datagram is

- ☐ a. 60 bytes
- ☐ b. 25 bytes
- ☒ c. 40 bytes
- ☐ d. 20 bytes

The correct answer is:

40 bytes

Question **34**

Complete

Mark 1.00 out of 1.00

For a given subnet mask 255.128.0.0, what is the number of subnets?

- ☒ a. 2
- ☐ b. 8
- ☐ c. 6
- ☐ d. 4

The correct answer is:

2

Question **35**

Complete

Mark 0.00 out of 1.00

In UDP, if data is lost in the middle, what will be the next action?

Select one:

- ☐ No data sending will be done
- ☒ It will be retransmitted until it reaches to its destination
- ☐ It will be ignored and the next packet will be transmitted
- ☐ None of the above

The correct answer is: It will be ignored and the next packet will be transmitted

Question **36**

Complete

Mark 0.00 out of 1.00

An organization follows Class C for their internal network. One of the host in the organization has an IP address 162.198.20.1. What will be the number of possible network addresses and host addresses? What will the broadcast address of the network?

- ☐ a. Network addresses 2097152, Host addresses 254, Broadcast address 162.198.20.255
- ☒ b. Network addresses 2097152, Host addresses 254, Broadcast address 162.198.255.255
- ☐ c. Network addresses 16384, Host addresses 65534, Broadcast address 162.198.255.255
- ☐ d. Network addresses 2097150, Host addresses 256, Broadcast address 162.198.20.255

The correct answer is:

Network addresses 2097152, Host addresses 254, Broadcast address 162.198.20.255

Question **37**

Complete

Mark 1.00 out of 1.00

What is the primary consideration in scenarios where UDP is preferred over TCP?

- ☐ a. Connection establishment efficiency
- ☒ b. Low latency
- ☐ c. High reliability
- ☐ d. Error correction

The correct answer is:

Low latency

Question **38**

Complete

Mark 1.00 out of 1.00

Electronic mail uses which Application layer protocol?

- ☐ a. HTTP
- ☐ b. FTP
- ☐ c. SIP
- ☒ d. SMTP

The correct answer is:

SMTP

Question **39**

Complete

Mark 0.00 out of 1.00

Which of the following statements is not applicable for cable internet access?

- a) It is a shared broadcast medium
- b) It includes Hybrid Fiber Co-axials
- c) Cable modem connects home PC to Ethernet port
- d) Analog signal is converted to digital signal in DSLAM

- ☒ a. a
- ☐ b. c
- ☐ c. b
- ☐ d. d

The correct answer is:

d

Question **40**

Complete

Mark 1.00 out of 1.00

Which of the following would be good reason to run NAT?

- (i) You need to connect to the internet and your hosts do not have globally unique IP addresses.
- (ii) You change to a new ISP that requires you to renumber your network.
- (iii) You do not want any hosts connecting to the internet.
- (iv) You require two intranet with duplicate addresses to merge.

☒ a. 1, 2 and 4 only

☐ b. All of these

☐ c. 2 and 4 only

☐ d. 3 only

The correct answer is:

1, 2 and 4 only

Question **41**

Complete

Mark 1.00 out of 1.00

Which of the following is a set of rules that governs the data communication in a computer network

☐ a. None of these

☒ b. Protocols

☐ c. Activity standards

☐ d. RFCs

The correct answer is:

Protocols

Question **42**

Complete

Mark 1.00 out of 1.00

What is the primary purpose of a virtual local area networks?

- ☐ a. Simulating a network
- ☐ b. Demonstrating the proper layout for network
- ☐ c. To create a virtual private network
- ☒ d. Segmenting a network inside a switch or device

The correct answer is:

Segmenting a network inside a switch or device

Question **43**

Complete

Mark 1.00 out of 1.00

What will be the propagation time when the distance between two points is 2400km? Assuming the propagation speed to be 4×10^8 m/s in cable

- ☐ a. 1ms
- ☐ b. 2ms
- ☐ c. 5ms
- ☒ d. 6ms

The correct answer is:

6ms

Question **44**

Complete

Mark 1.00 out of 1.00

In selective repeat request window, the sender resends.....

- ☐ a. packets from starting
- ☐ b. All the packets
- ☐ c. packets which are not lost

- ☒ d. only those packets which are lost or corrupted

The correct answer is:

only those packets which are lost or corrupted

Question **45**

Complete

Mark 1.00 out of 1.00

Routing inside a single administrative domain is called as..... routing.

- ☐ a. Path Vector
- ☐ b. Inter-domain
- ☒ c. Intra-domain
- ☐ d. None of these

The correct answer is:

Intra-domain

Question **46**

Complete

Mark 1.00 out of 1.00

The size of an IP address in IPV6 is.....

- ☐ a. 40bytes
- ☐ b. 128 bytes
- ☒ c. 128 bits
- ☐ d. 60 bits

The correct answer is:

128 bits

Question **47**

Complete

Mark 1.00 out of 1.00

Suppose the IP address of device **1** is 10.105.1.113 and device **2** is 10.105.1.91 and the subnet mask used is 255.255.255.192. Both the devices will be able to communicate with each other using

- ☐ a. Router
- ☐ b. Hub
- ☐ c. None of these
- ☒ d. Switch

The correct answer is:
Switch

Question **48**

Complete

Mark 0.00 out of 1.00

Which are end system devices

- ☐ a. web servers
- ☐ b. All of these
- ☒ c. smartphones
- ☐ d. mail servers

The correct answer is:
All of these

Question **49**

Complete

Mark 1.00 out of 1.00

Consider the Go-back-N protocol with a sender's window size of '8'. Suppose at time 't' the next frame in the buffer (i.e. the next inorder frame) the receiver is expecting has a sequence No. 5. Assume that the medium does not reorder the messages. What is the possible set of sequence number inside the sender's window at time 't'. Assume the sender has already received acknowledgment for all the previously transmitted frames.

- ☐ a. [5, 13]
- ☐ b. [4, 12]
- ☒ c. [5, 12]
- ☐ d. None of these

The correct answer is:

[5, 12]

Question **50**

Complete

Mark 0.00 out of 1.00

What is the correct order of the operation of open shortest path first algorithm?

- i. Establishing adjacencies and synchronization of database
- ii. Hello packet
- iii. Propagation of link state information and building of routing tables

- ☐ a. iii-ii-i
- ☐ b. ii-i-iii
- ☐ c. i-ii-iii
- ☒ d. ii-iii-i

The correct answer is:

ii-i-iii

Question **51**

Complete

Mark 1.00 out of 1.00

What is the primary purpose of Open Shortest Path First?

- ☒ a. Link-state routing within an Autonomous Systems
- ☐ b. Interdomain routing
- ☐ c. lassful routing
- ☐ d. None of these

The correct answer is:

Link-state routing within an Autonomous Systems

Question **52**

Complete

Mark 1.00 out of 1.00

Which address identifies a process on a host?

- ☐ a. physical address
- ☒ b. port address
- ☐ c. specific address
- ☐ d. logical address

The correct answer is:

port address

Question **53**

Complete

Mark 1.00 out of 1.00

The OSI model was developed ____ TCP/IP model.

- ☒ a. after
- ☐ b. None of these
- ☐ c. prior to
- ☐ d. simultaneous to

The correct answer is:

after

Question **54**

Complete

Mark 0.00 out of 1.00

Which of the following statements about UDP is true?

- ☐ a. It is connectionless and does not provide error recovery.
- ☒ b. It establishes a connection before data transmission.
- ☐ c. It is slower and heavier than TCP.
- ☐ d. It guarantees the delivery of all packets.

The correct answer is:

It is connectionless and does not provide error recovery.

Question **55**

Complete

Mark 0.00 out of 1.00

If a class B network on the internet has a subnet mask of 255.255.248.0, what is the maximum number of hosts per subnet?

- ☐ a. Network addresses 16384, Host addresses 65536, Broadcast address 162.255.255.255
- ☒ b. Network addresses 16384, Host addresses 65534, Broadcast address 255.255.255.255
- ☐ c. Network addresses 16384, Host addresses 65534, Broadcast address 162.255.255.255
- ☐ d. Network addresses 65536, Host addresses 65534, Broadcast address 255.255.255.255

The correct answer is:

Network addresses 16384, Host addresses 65534, Broadcast address 162.255.255.255

Question **56**

Complete

Mark 1.00 out of 1.00

Reverse Address Resolution protocol

- ☐ a. maps MAC address to IP address
- ☐ b. maps public address to private address
- ☐ c. maps private address to public address
- ☒ d. maps IP address to MAC address

The correct answer is:

maps IP address to MAC address

Question **57**

Complete

Mark 1.00 out of 1.00

EUI-64 process is a method we can use to automatically configure IPV6 host addresses.

- ☐ a. False
- ☒ b. True

The correct answer is:

True

Question **58**

Complete

Mark 1.00 out of 1.00

What are the propagation time and the transmission time for a 2 Mbyte message (an image) if the transmission rate of the network is 1Mbps? Assume that the distance between the sender and the receiver is 4000 km and that light travels at 4×10^9 m/s.

- ☐ a. 2msecs, 40msecs
- ☐ b. 2msecs, 40secs
- ☐ c. 1 msec, 40msecs
- ☒ d. 1 msec, 16 secs

The correct answer is:

1 msec, 16 secs

Question **59**

Complete

Mark 0.00 out of 1.00

The IP network 192.168.50.0 is to be divided into 10 equal sized subnets. Which of the following subnet masks can be used for the above requirement?

- ☒ a. 255.255.255.240
- ☐ b. 255.255.255.255
- ☐ c. 255.255.0.0
- ☐ d. 255.255.255.0

The correct answer is:
255.255.255.0

Question **60**

Complete

Mark 1.00 out of 1.00

Which of the following protocols is the bit-oriented protocol?

- ☐ a. HTTP
- ☒ b. HDLC
- ☐ c. SSL
- ☐ d. All of the these

The correct answer is:
HDLC

Question **61**

Complete

Mark 1.00 out of 1.00

The ____ layer links network/user support layers by segmenting and rearranging the data.

- ☒ a. transport layer
- ☐ b. application layer
- ☐ c. network layer
- ☐ d. session Layer

The correct answer is:
transport layer

Question **62**

Complete

Mark 1.00 out of 1.00

Which is of the following statement is incorrect, if the transmission bandwidth of a shared broadcast media of 50 Mbps is shared by 500 users then,

- ☒ a. Using CDMA scheme, each of the users have an access to 100 Kbps of bandwidth
- ☐ b. Using TDMA scheme, each of the users have an access to 100 Kbps of bandwidth
- ☐ c. Using CDMA scheme, each of the users have an access to 50 Mbps of bandwidth
- ☐ d. Using FDMA scheme, each of the users have an access to 100 Kbps of bandwidth

The correct answer is:

Using CDMA scheme, each of the users have an access to 100 Kbps of bandwidth

Question **63**

Complete

Mark 1.00 out of 1.00

Bluetooth is a wireless technology for

- ☐ a. WAN
- ☐ b. LAN
- ☒ c. PAN
- ☐ d. MAN

The correct answer is:

PAN

Question **64**

Complete

Mark 1.00 out of 1.00

Which is not true for Packet switching?

- ☐ a. Multiple users can use the same channel while transferring their packets.
- ☒ b. A uniform/ dedicated path is followed throughout the session.
- ☐ c. The delivery of these packets becomes easy when complicated protocols are used.
- ☐ d. Installation costs of packet switching are expensive.

The correct answer is:

A uniform/ dedicated path is followed throughout the session.

Question **65**

Complete

Mark 1.00 out of 1.00

Consider the following statements:

1. In the 1-persistent CSMA access protocol, the node senses the channel, if idle it sends the data, otherwise it checks the medium after a random amount of time (not continuously) and transmits when found idle.
2. In the non-persistent CSMA access protocol, the node senses the channel, if idle it sends the data, otherwise it continuously keeps on checking the medium for being idle and transmits unconditionally (with 1 probability) as soon as the channel gets idle.

- ☐ a. Only 2 true
- ☐ b. Only 1 true
- ☒ c. Both 1 and 2 are false
- ☐ d. Both 1 and 2 are true

The correct answer is:

Both 1 and 2 are false

Question **66**

Complete

Mark 0.00 out of 1.00

A 50 Kbps satellite link has a propagation delay of 500 ms. The transmitter employs the "Go Back 16 ARQ" scheme. Assuming that each frame is 200 bytes long, what is the maximum data rate possible?

- ☐ a. 2.48 Mbps
- ☐ b. 248 bps
- ☒ c. None of these
- ☐ d. 2.48 Kbps

The correct answer is:

2.48 Kbps

Question **67**

Complete

Mark 1.00 out of 1.00

Identify the correct order in which the following actions take place in an interaction between a web browser and a web server

- (1) The web browser requests a web page using HTTP
- (2) The web browser establishes a TCP connection with the web browser
- (3) The web browser sends the requested web page using HTTP
- (4) The web browser resolves the domain name using DNS

- ☐ a. 4,3,1,2
- ☒ b. 4,2,1,3
- ☐ c. 3,2,1,4
- ☐ d. None of these

The correct answer is:

4,2,1,3

Question **68**

Complete

Mark 0.00 out of 1.00

Which one of the following uses UDP as the transport protocol?

- ☒ a. HTTP
- ☐ b. SMTP

- ☐ c. DNS
- ☐ d. Telnet

The correct answer is:
DNS

Question **69**

Complete

Mark 1.00 out of 1.00

Which of the following is incorrect about Network Address Translation?

- ☐ a. NAT is a process in which one or more local IP address is translated into one or more Global IP address and vice versa.
- ☐ b. Certain application will not function while NAT is enabled.
- ☒ c. Router will do NAT translation without configuration.
- ☐ d. NAT results in switching path delays.

The correct answer is:
Router will do NAT translation without configuration.

Question **70**

Complete

Mark 1.00 out of 1.00

What is the size of the window for host A if the value of receiver window (rwnd) is 5000 bytes and the value of congestion window (cwnd) is 5500 bytes?

- ☐ a. None of these
- ☒ b. 5000 bytes
- ☐ c. 5500 bytes
- ☐ d. 10500 bytes

The correct answer is:
5000 bytes

Question **71**

Complete

Mark 1.00 out of 1.00

The number of bits in IPV4 address, IPV6 address, MAC address and Port address are

- ☐ a. 32, 128, 64, 16
- ☐ b. 32, 128, 48, 32
- ☐ c. 128, 32, 48, 16
- ☒ d. 32, 128, 48, 16

The correct answer is:

32, 128, 48, 16

Question **72**

Complete

Mark 1.00 out of 1.00

Optical Network Terminator is connected to splitter using _____

- ☐ a. hybrid fiber co-axial cable
- ☐ b. Twisted pair cable
- ☒ c. Optical cable
- ☐ d. microwave link

The correct answer is:

Optical cable

Question **73**

Complete

Mark 1.00 out of 1.00

The computation of the shortest path first in RIP is usually done by

- ☐ a. Vector algorithm
- ☐ b. Dijkstra's algorithm
- ☒ c. Bellman Ford algorithm
- ☐ d. Kruskal's algorithm

The correct answer is:
Bellman Ford algorithm

Question **74**

Complete

Mark 1.00 out of 1.00

Dynamic Host Configuration Protocol issues to the client.

- ☐ a. MAC address
- ☒ b. IP address
- ☐ c. Port address
- ☐ d. None of these

The correct answer is:
IP address

Question **75**

Complete

Mark 1.00 out of 1.00

Transmission rate is decided by

- ☒ a. physical layer
- ☐ b. transport layer
- ☐ c. network layer
- ☐ d. data link layer

The correct answer is:
physical layer

Question **76**

Complete

Mark 1.00 out of 1.00

Find out the invalid subnet mask from the following

- ☐ a. **255.240.0.0**
- ☐ b. **None of these**
- ☒ c. **223.0.0.0**
- ☐ d. **255.255.255.252**

The correct answer is:
223.0.0.0

Question **77**

Complete

Mark 1.00 out of 1.00

In computer networks nodes are....

- ☐ a. the computer that routes the data
- ☒ b. All of these
- ☐ c. the computer that terminates the data
- ☐ d. the computer that originates/generates the data

The correct answer is:

All of these

Question **78**

Complete

Mark 1.00 out of 1.00

In the even parity, find the parity bit of data 1001001001.

- ☒ a. **0**
- ☐ b. **X**
- ☐ c. **None of these**
- ☐ d. **1**

The correct answer is:

0

Question **79**

Complete

Mark 0.00 out of 1.00

Error control is responsibility of which OSI layers

- ☐ a. **Network and Transport layer**
- ☐ b. **All of these**
- ☐ c. **Data link and Transport layer**
- ☒ d. **Physical and Data link layer**

The correct answer is:

Data link and Transport layer

Question **80**

Complete

Mark 1.00 out of 1.00

Which sub-layer of the data link layer performs data link functions that depend upon the type of medium?

- ☒ a. **Media access control sub-layer**
- ☐ b. **Logical link control sub-layer**
- ☐ c. **network interface control sub-layer**
- ☐ d. **error control sub-layer**

The correct answer is:

Media access control sub-layer

Question **81**

Complete

Mark 1.00 out of 1.00

Define the type of this Ethernet frame destination address **FF:FF:FF:FF:FF:FF**

- ☐ a. Multicast
- ☒ b. Broadcast
- ☐ c. None of these
- ☐ d. Unicast

The correct answer is:

Broadcast

Question **82**

Complete

Mark 1.00 out of 1.00

Which of the following type of addressing is not supported by IPV6?

- ☐ a. None of these
- ☒ b. Broadcast
- ☐ c. Unicast
- ☐ d. Multicast

The correct answer is:

Broadcast

Question **83**

Complete

Mark 1.00 out of 1.00

The metric used by.....protocol is the hop count.

- ☐ a. Border Gateway Protocol
- ☐ b. Open Shortest Path First
- ☐ c. Enhanced Interior Gateway Routing Protocol
- ☒ d. Routing Information Protocol

The correct answer is:

Routing Information Protocol

Question **84**

Complete

Mark 1.00 out of 1.00

What kind of transmission medium is most appropriate to carry data in a computer network that is exposed to electrical interference?

- ☐ a. Un-shielded twisted pair
- ☐ b. Microwave link
- ☒ c. Optical fiber
- ☐ d. Coaxial cable

The correct answer is:

Optical fiber

Question **85**

Complete

Mark 1.00 out of 1.00

Which of the following protocol is not used to resolve one form of addressing to another one?

- ☒ a. Dynamic Host Configuration Protocol
- ☐ b. Domain Name System
- ☐ c. Reverse Address Resolution Protocol
- ☐ d. Address Resolution Protocol

The correct answer is:

Dynamic Host Configuration Protocol

Question **86**

Complete

Mark 1.00 out of 1.00

Find out the valid IPV4 address from the following

- ☐ a. 221.34.7.8.20
- ☐ b. 112.56.075.78
- ☐ c. 75.45.301.14
- ☒ d. 224.200.89.90

The correct answer is:

224.200.89.90

Question **87**

Complete

Mark 1.00 out of 1.00

Two popular routing protocol algorithms are distance vector (DVR) and link state routing (LSR). Which of the following are not true?

- ☐ a. In LSR, only the immediate neighbour routing vector entries are flooded in the network
- ☐ b. DVR requires lesser number of network messages than LSR
- ☒ c. In LSR, the entire routing table is flooded in the network
- ☐ d. Count-to-infinity is a problem only with DVR and not with LSR

The correct answer is:

In LSR, the entire routing table is flooded in the network

Question **88**

Complete

Mark 1.00 out of 1.00

Which one of the following is not a function of network layer?

- ☐ a. **inter-networking**
- ☐ b. **congestion control**
- ☐ c. **routing**
- ☒ d. **error control**

The correct answer is:

error control

Question **89**

Complete

Mark 1.00 out of 1.00

Which multiple access techniques is used by IEEE 802.11 standards for wireless LANs?

- ☒ a. CSMA/CA
- ☐ b. CSMA/CD
- ☐ c. ALOHA
- ☐ d. CSMA

The correct answer is:

CSMA/CA

Question **90**

Complete

Mark 0.00 out of 1.00

What does a network switch do when it receives a frame with a destination MAC address that is not in its MAC address table?

- ☒ a. Forwards the frame only to the source port
- ☐ b. Floods the frame to all ports
- ☐ c. Initiates MAC address aging
- ☐ d. Drops the frame

The correct answer is:

Floods the frame to all ports

Question **91**

Complete

Mark 1.00 out of 1.00

In routing, the routing tables are updated periodically and the routing tables are not manually updated by the network administrator.

- ☒ a. Dynamic routing
- ☐ b. Static routing
- ☐ c. None of these.
- ☐ d. Both static and dynamic routing

The correct answer is:

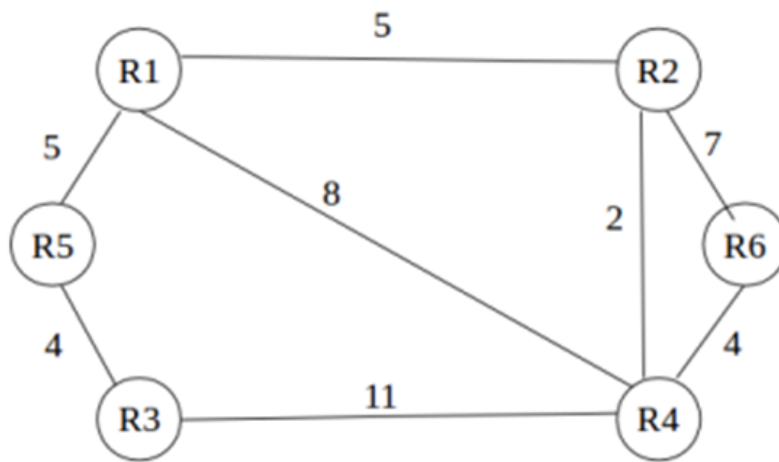
Dynamic routing

Question **92**

Complete

Mark 0.00 out of 1.00

Explain the distance vector routing algorithm by running it for the following graph. Calculate the shortest distance from source R1 to destination R6.



- ☐ a. 10
- ☐ b. 11
- ☐ c. None of these
- ☒ d. 12

The correct answer is:

11

Question **93**

Complete

Mark 1.00 out of 1.00

Which of the following are disadvantages of Network Address Translation?

- (i) Translation introduces switching path delays.
- (ii) Conserve legally registered addresses.
- (iii) Cause loss of end-to-end IP traceability
- (iv) Increase flexibility when connecting to the internet
- (v) Certain application will not function with Network Address Translation enabled.
- (vi) Reduce address overlap occurrence

☒ a. 1,3 and 5 only

☐ b. 1 and 5 only

☐ c. 3 and 5 only

☐ d. 2,4 and 5 only

The correct answer is:
1,3 and 5 only

Question **94**

Complete

Mark 1.00 out of 1.00

Which of the following is considered as the biggest advantage of preferring User Datagram protocol?

☐ a. Reliable

☒ b. Low overheads

☐ c. More overheads

☐ d. Connection oriented

The correct answer is:
Low overheads

Question **95**

Complete

Mark 0.00 out of 1.00

What is the type of the destination address of these Ethernet address **47:30:10:21:10:1A**

- ☒ a. Unicast
- ☐ b. Multicast
- ☐ c. Not a valid address
- ☐ d. Broadcast

The correct answer is:

Multicast

Question **96**

Complete

Mark 1.00 out of 1.00

While configuring the router, the IP address assigned to one port is 201.14.2.1/23. LAN1 is attached to this port of the router. Which of the following IP addresses are valid on this LAN1 interface,

I1: 201.14.1.100

I2: 201.14.1.3

I3: 201.14.2.2

I4: 201.14.3.0

- ☐ a. Only I2 and I3
- ☒ b. Only I3 and I4
- ☐ c. Only I1 and I3
- ☐ d. Only I1 and I2

The correct answer is:

Only I3 and I4

Question **97**

Complete

Mark 1.00 out of 1.00

Error detection and correction are offered by both

- ☐ a. Data link layer and Network Layer
- ☐ b. Network Layer and Transport Layer
- ☒ c. Data link layer and Transport Layer
- ☐ d. Physical Layer and Data link Layer

The correct answer is:

Data link layer and Transport Layer

Question **98**

Complete

Mark 1.00 out of 1.00

Which is not true for Packet switching?

- ☐ a. The delivery of these packets becomes easy when complicated protocols are used.
- ☒ b. A dedicated path is followed throughout the session.
- ☐ c. Installation costs of packet switching are expensive.
- ☐ d. Multiple users can use the same channel while transferring their packets.

The correct answer is:

A dedicated path is followed throughout the session.

Question **99**

Complete

Mark 0.00 out of 1.00

Which of the following statement(s) is /are true about TCP?

- (i) TCP is connection oriented protocol
- (ii) TCP uses a three way handshake to establish a connection
- (iii) TCP receives data from application as a single stream

- ☐ a. (i) only
- ☐ b. (i) and (ii) only
- ☒ c. (i) and (iii) only
- ☐ d. (i), (ii) and (iii)

The correct answer is:

(i), (ii) and (iii)

Question **100**

Complete

Mark 1.00 out of 1.00

When might UDP be a suitable choice for data transmission?

- ☒ a. In scenarios where occasional data loss is acceptable.
- ☐ b. When guaranteed delivery is critical.
- ☐ c. In applications requiring constant connection establishment.
- ☐ d. For long-distance communication.

The correct answer is:

In scenarios where occasional data loss is acceptable.

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