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QUESTION 1

1 points

Save Answer

Which of the following switching approaches is used in a network which permits communication ends to establish a connection and reliably moves data in the form of signals that are transmitted in time slots dedicated for the established connection?

☒ I. Circuit switching

☐ II. Datagram packet switching

☐ III. Power switching

☐ IV. virtual circuit packet switching

QUESTION 2

1 points

Save Answer

Data link layer is responsible for performing which of the following:

☐ I. Restructure bit-sequences into frames

☐ II. Addressing senders and receivers of frames inside one physically connected network

☐ III. Determining how a shared media is utilized by communicating nodes in a single network (using one of the media access protocols)

☒ IV. All of the above

QUESTION 3

1 points

Save Answer

The sending media in which a sender wants to deliver a message to a particular host in a network:

☐ I. Broadband

☒ II. Unicast

☐ III. Multicast

☐ IV. Broadcast

QUESTION 4

1 points

Save Answer

The sending media in which a sender wants to deliver a message to a multiple hosts in a network but not to all hosts:

☒ I. Multicast

☐ II. Broadband

☐ III. Unicast

☐ IV. Broadcast

QUESTION 5

1 points

Save Answer

Which of the following is correct:

☐ I. Higher layers can provide services to lower layers

☒ II. Lower layers can provide services to higher layers

☐ III. A layer can provide services to the layers above and below it

☐ IV. None of the above is correct

QUESTION 6

1 points

Save Answer

Time for a packet to go from sender to destination and return

☐ I. Propagation delay

☒ II. Round Trip Time (RTT)

☐ III. Latency

☐ IV. Bandwidth

QUESTION 7

1 points

Save Answer

An example of a hierarchical addressing scheme that provides information about the network that contain the address

☐ I. Port address

☐ II. MAC address

☒ III. IP address

☐ IV. URL

QUESTION 8

1 points

Save Answer

In Wi-Fi, the frame format could contain up to how many MAC addresses?

☐ I. 2

☒ II. 4

☐ III. 6

☐ IV. 8

QUESTION 9

1 points

Save Answer

The standard media access protocol used in Wi-Fi is

☐ I. CSMA/CD

☒ II. CSMA/CA

☐ III. ALOHA

☐ IV. TDM

QUESTION 10

1 points

Save Answer

The media access protocols that permit one node to use a shared media after getting permission from other nodes

☐ I. Random access protocols

☒ II. Controlled access protocols

☐ III. Channelization protocols

☐ IV. None of the above

QUESTION 11

1 points

Save Answer

A communication protocol that enables the senders to send data without informing the receivers in advance

☒ I. Connectionless

☐ II. Connection signal

☐ III. Connection line

☐ IV. Connection-oriented

QUESTION 12

1 points

Save Answer

When a networking device moves from one network to another, which of the following addresses changes?

☐ I. The user Mail address

☐ II. The device's MAC address

☒ III. The device's IP address

☐ IV. The user Post address

QUESTION 13

1 points

Save Answer

The networking device that forwards signals received from one of its ports to all other ports without being able to understand any control information included in the transmitted signals (a device that can't split the collision domain of connected hosts)

☐ I. A switch / A bridge

☐ II. An access point

☐ III. A router

☒ IV. A hub

QUESTION 14

1 points

Save Answer

A frame sent by data link layer protocol contains which of the following control information:

☐ I. Transport layer control information (encapsulated)

☐ II. Network layer control information (encapsulated)

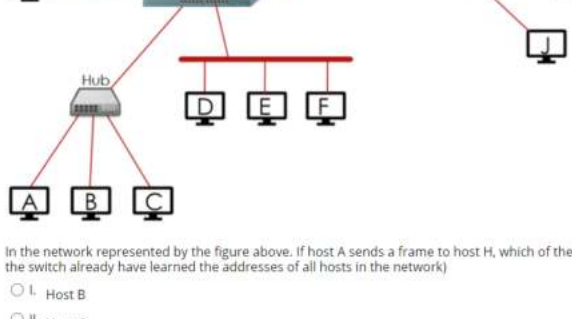
☐ III. Data link layer control information

☒ IV. All of the above

QUESTION 15

1 points

Save Answer



In the network represented by the figure above, if host A sends a frame to host H, which of the following will see the frame beside H? (Assume that the switch already have learned the addresses of all hosts in the network)

☐ I. Host B

☐ II. Host G

☐ III. Both hosts mentioned in the previous choices

☐ IV. None of the choices are correct

QUESTION 16

1 points

Save Answer

A 10 Mbps link between a video server and a client is established. If the distance between the client and the server is 750 kilometer and if receiving a video file has a latency of 10 seconds. Find the size of the video file (assume that the speed of light is 2.8×10^8 m/s and no queuing delay. Note: 1 Kilometer = 10^3 meter)

☐ I. 100 Megabit

☐ II. 300 Megabit

☒ III. 500 Megabit

☐ IV. 700 Megabit

QUESTION 17

1 points

Save Answer

The destination MAC address "17:18:19:10:11:12" represents

☐ I. A unicast address

☐ II. A multicast address

☒ III. A broadcast address

☐ IV. An IP address

QUESTION 18

1 points

Save Answer

What is the minimum hamming distance for the codeword set {000000, 010011, 101100, 111111}

☐ I. 1

☐ II. 3

☐ III. 5

☐ IV. 6

QUESTION 19

1 points

Save Answer

Multiple nodes are using CSMA/CD to access a shared channel. One of the nodes (let's call it Node A) has been trying to send a frame 8 times but every try resulted in a collision. How long would Node A wait before retrying to send the frame again (the back-off time after the 4th collision)?

☐ I. A random time between 0 and 63 time unit

☐ II. A random time between 0 and 127 time unit

☐ III. A random time between 0 and 255 time unit

☐ IV. A random time between 0 and 511 time unit

QUESTION 20

1 points

Save Answer

A 10 Mbps half-duplex link between two stations is established. If the distance between the two stations is 20 Km and if the stations agreed to use CSMA/CD to access the link, what is the minimum frame size that a sender must send to detect any potential collision? (Assume that the speed of light is 2.8×10^8 m/s. Note: 1 Km = 10^3 m, 1 Mbps = 2^{20} bit/s)

☐ I. 1130 bits

☐ II. 1498 bits

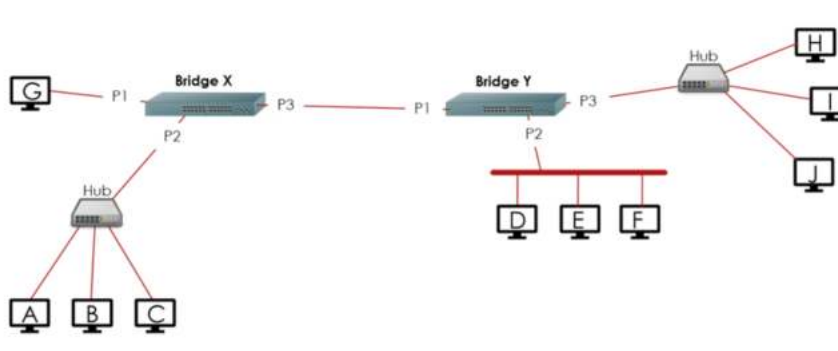
☒ III. 2275 bits

☐ IV. 4688 bits

QUESTION 21

1 points

Save Answer



If Bridge X and Bridge Y are used to link the four LAN segments as shown in the picture. If both bridges initially have no entries in their forwarding table, what would the forwarding table of Bridge X look like after the following frames are sent in sequence:

<Src=G, Dest=C> then <Src=D, Dest=C> then <Src=A, Dest=G>

☐ I. Bridge X forwarding table: <Host G, Port 1>

☐ II. Bridge X forwarding table: <Host G, Port 1>, <Host D, Port 3>

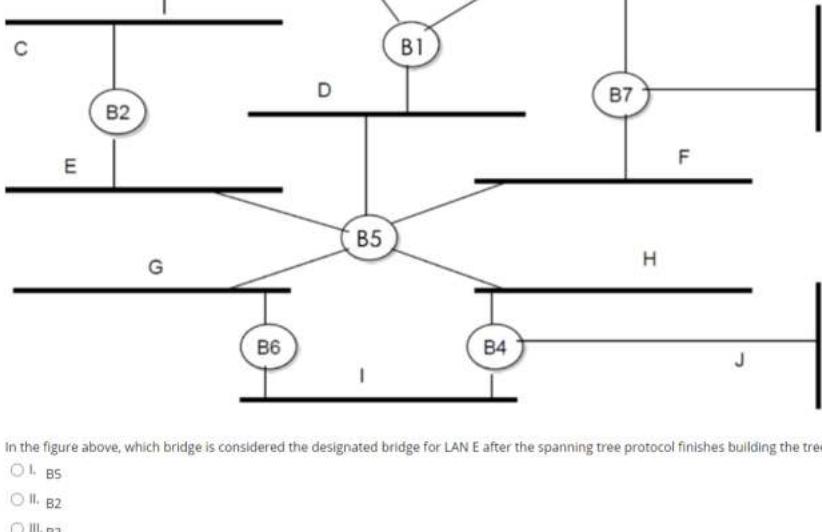
☐ III. Bridge X forwarding table: <Host G, Port 1>, <Host D, Port 3>, <Host A, Port 2>

☐ IV. Bridge X forwarding table: <Host G, Port 1>, <Host D, Port 3>, <Host A, Port 2>, <Host C, Port 2>

QUESTION 22

1 points

Save Answer



In the figure above, which bridge is considered the designated bridge for LAN E after the spanning tree protocol finishes building the tree?

☐ I. B5

☐ II. B2

☒ III. B3

☐ IV. B1

QUESTION 23

1 points

Save Answer

Let's assume that a configuration BPDU has the following information: [Root ID, cost to reach the root, Bridge ID]. If a bridge B3 has the configuration BPDU [B2,5,B3]. How will B3 change this BPDU after receiving B2's BPDU that has the following information [B1,7,B2].

☐ I. B3 will keep his BPDU as [B2,5,B3]

☐ II. B3 will update its BPDU to [B1,7,B3]

☒ III. B3 will update its BPDU to [B1,8,B3]

☐ IV. B3 will update its BPDU to [B1,8,B2]

QUESTION 24

1 points

Save Answer

What is the checksum of an IP header that has the sum of "C4B0" in hexadecimal when adding every 16-bit word of it together?

☐ I. 3B43 hexadecimal

☐ II. 24B3 hexadecimal

☒ III. 3B42 hexadecimal

☐ IV. DB4C hexadecimal

QUESTION 25

1 points

Save Answer

How many bits belong to the network ID part of the following CIDR address "170.50.4.0/22"?

☐ I. 170

☐ II. 4

☐ III. 10

☐ IV. 22

QUESTION 26

1 points

Save Answer

What is the CIDR address that represents the addresses between 198.125.12.0 and 198.125.15.255?

☐ I. 198.125.15.0/24

☐ II. 198.125.15.0/22

☒ III. 198.125.12.0/22

☐ IV. 198.125.12.0/24

QUESTION 27

1 points

Save Answer

If an organization is given the CIDR address 195.50.64.0/18. How many subnets can the organization have if each subnet needs 1022 valid host addresses? (Hint: this depends on the number of bits that will be used to distinguish the subnets)

☐ I. $2^{12} = 4$ subnets

☐ II. $2^{14} = 16$ subnets

☐ III. $2^{16} = 64$ subnets

☐ IV. $2^{18} = 256$ subnets

QUESTION 28

1 points

Save Answer

Which CIDR address from the following has the longest prefix matching with the address 215.200.50.96? Note: 96 in decimal = 01100000 in binary

☐ I. 215.200.50.128/25

☐ II. 215.200.50.32/27

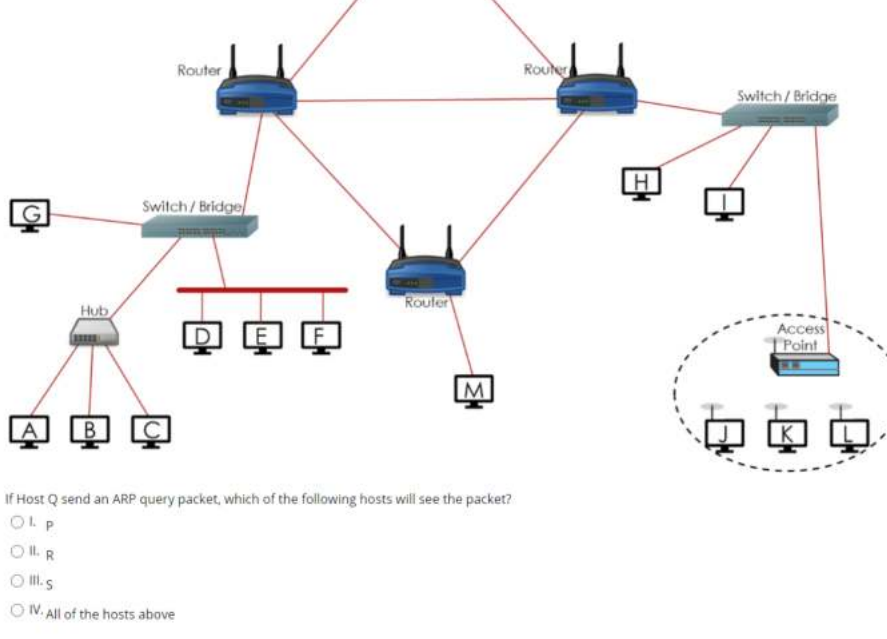
☒ III. 215.200.50.64/26

☐ IV. 215.200.50.48/28

QUESTION 29

1 points

Save Answer



If Host Q send an ARP query packet, which of the following hosts will see the packet?

☐ I. P

☐ II. R

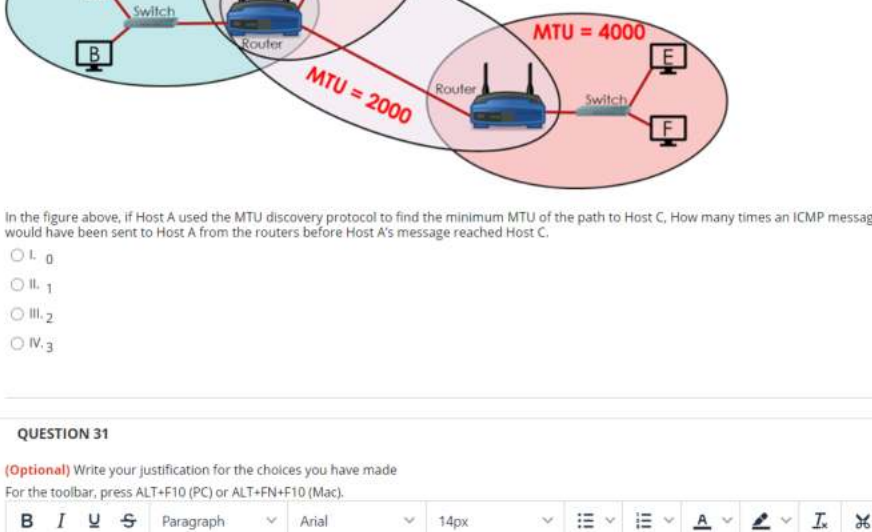
☐ III. S

☐ IV. All of the hosts above

QUESTION 30

1 points

Save Answer



In the figure above, if Host A used the MTU discovery protocol to find the minimum MTU of the path to Host C. How many times an ICMP message would have been sent to Host A from the routers before Host A's message reached Host C.

☐ I. 0

☐ II. 1

☒ III. 2

☐ IV. 3

QUESTION 31

0 points

Save Answer

(Optional) Write your justification for the choices you have made

For the toolbar, press ALT+F10 (PC) or ALT+FN+F10 (Mac).

B *I* U ~~X~~ Paragraph Arial 14px [font settings icons]

P 0 WORDS. POWERED BY TINY

QUESTION 32

0 points

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You can upload your justification file here

Attach File

Browse Local Files

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Save All Answers

Save and Submit