QUESTION 1

1 points Saved

Which of the following networking technologies uses the circuit switching approach?

- I. Ethernet
- II. ATM
- III. telephone
- IV. None of the above

QUESTION 2

1 points Saved

Which layer does the Transmission Control Protocol (TCP) belong to?

- I. Network layer
- II. Application Layer
- III. Transport layer
- IV. Data link layer

QUESTION 3

1 points ✔ Saved

Which of the following switching approaches is used in a network which moves data between communication ends in the form of packets without guaranteeing the delivery of these packets?

- I. Virtual circuit packet switching
- II. Power switching
- III. Datagram packet switching
- IV. Circuit switching

QUESTION 4

1 points ✔ Saved

Which of the following network nodes typically implements data link layer protocols such as CSMA?

- I. Hubs
- II. Switches / bridges
- III. All nodes mentioned above
- IV. None of the above

QUESTION 5

1 points Saved

A communication protocol that requires connection establishment and termination before and after sending data

- I. Connection-oriented
- II. Connectionless
- III. Connection signal
- IV. Connection line

QUESTION 6

1 points Saved

If multiple bits in a frame flipped from 1 to 0 as a result of transmitting the frame in an unreliable transmission medium, what type of error is this?

- I. Fast error
- II. Slow error
- III. Burst error
- IV. Single-bit error

QUESTION 7

1 points ✓ Saved

What would a bridge do after receiving a frame through one of its ports with a destination MAC address listed in its forwarding table?

- I. The bridge Flood the frame to all other ports
- II. The bridge Discard the frame
- III. The bridge Saves the frame till it learn the destination MAC address
- IV. The bridge Forward the frame to a particular port listed in the forwarding table

QUESTION 8

1 points ✓ Saved

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

- I. The device's MAC address
- II. The user Post address
- III. The user Mail address
- IV. The device's IP address

QUESTION 9

1 points ✔ Saved

What would a bridge do after receiving a frame through one of its ports with a destination MAC address not available in its forwarding table?

- I. The bridge Discard the frame
- II. The bridge Saves the frame till it learn the destination MAC address
- III. The bridge Forward the frame to a particular random port
- IV. The bridge Flood the frame to all other ports

QUESTION 10

1 points ✔ Saved

Which layer does the internet protocol (IP) belongs to?

- I. Application Layer
- II. Transport layer
- III. Data link layer
- IV. Network layer

QUESTION 11

1 points ✔ Saved

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

- I. Multicast
- II. Unicast
- III. Broadcast
- IV. Broadband

QUESTION 12

1 points ✔ Saved

Which of the following is an example of decapsulation:

- I. Adding TCP header to data received from HTTP
- II. Removing TCP header from the data received from IP
- III. Both of the above is correct
- IV. None of the above is correct

QUESTION 13

1 points Saved

In CRC, if a receiver divides a codeword with a divisor and find the reminder to be 00000, The receiver will:

- (●) I. Accept the frame
- ( ) II. Augment the data
- ( ) III. Detect error
- ( ) IV. Change the divisor

QUESTION 14

1 points Saved

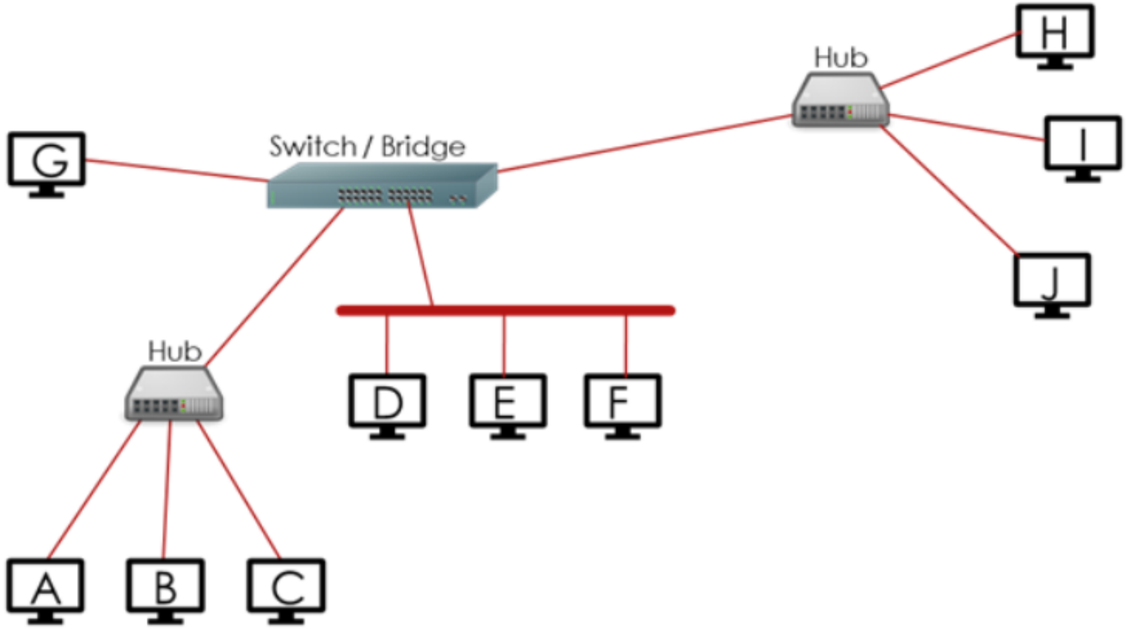
The transmission mode that allows communicating hosts to send and receive messages simultaneously:

- ( ) I. Simplex
- ( ) II. Complex
- (●) III. Full Duplex
- ( ) IV. Half Duplex

Question Completion Status:

QUESTION 15

1 points Saved



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.

QUESTION 16

1 points ✔ Saved

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 ✔ Saved

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 ✔ Saved

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 ✔ Saved

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 4^{th} collision)?

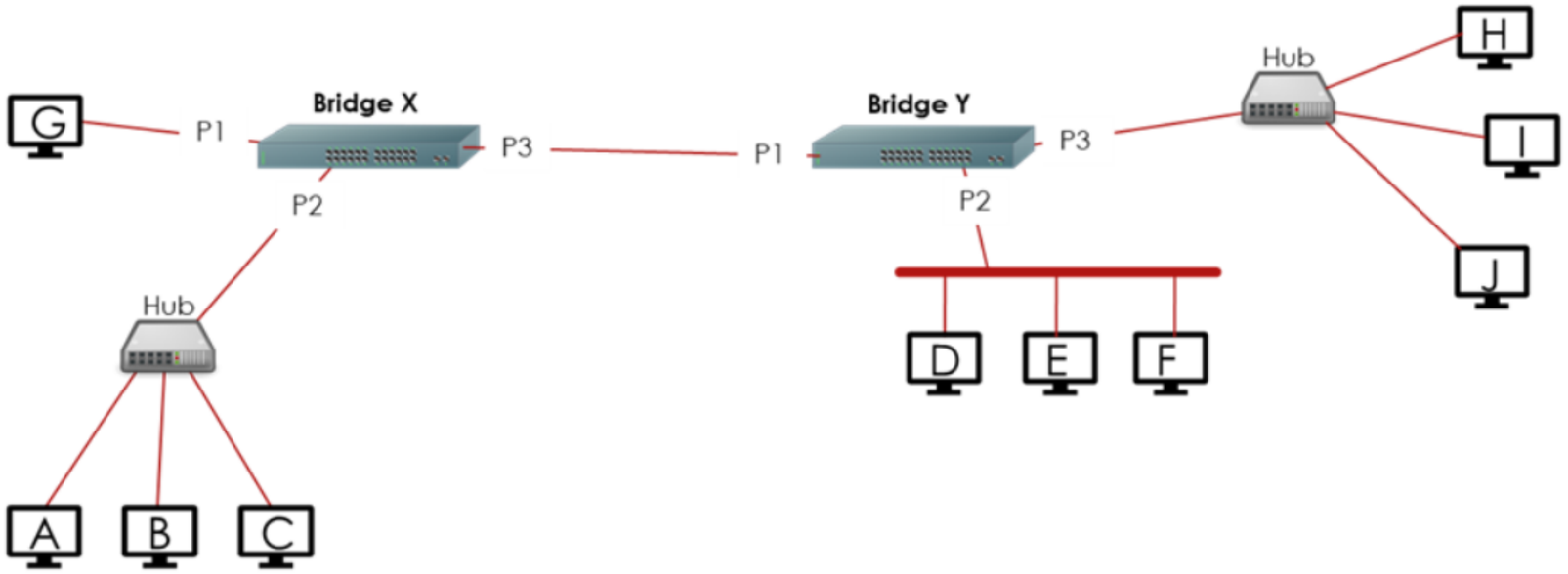
- I. A random time between 0 and 63 time unit
- II. A random time between 0 and 127 time unit
- III. A random time between 0 and 255 time unit
- IV. A random time between 0 and 511 time unit

QUESTION 20

1 points ✔ Saved

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



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 23

1 points ✔ Saved

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 ✔ Saved

What is the checksum of an IP header that has the sum of "C4BD" in hexadecimal when adding every 16-bit word of it together?

- I. 3B43 hexadecimal
- (●) II. 3B42 hexadecimal
- III. 24B3 hexadecimal
- IV. DB4C hexadecimal

QUESTION 25

1 points ✔ Saved

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 ✔ Saved

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

- I. 198.125.12.0/22
- II. 198.125.15.0/22
- III. 198.125.12.0/24
- IV. 198.125.15.0/24

QUESTION 27

1 points ✔ Saved

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. 2^2 = 4 subnets
- II. 2^4 = 16 subnets
- III. 2^6 = 64 subnets
- IV. 2^8 = 256 subnets

QUESTION 28

1 points ✔ Saved

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. 215.200.50.32/27
- II. 215.200.50.64/26
- III. 215.200.50.48/28
- IV. 215.200.50.128/25