



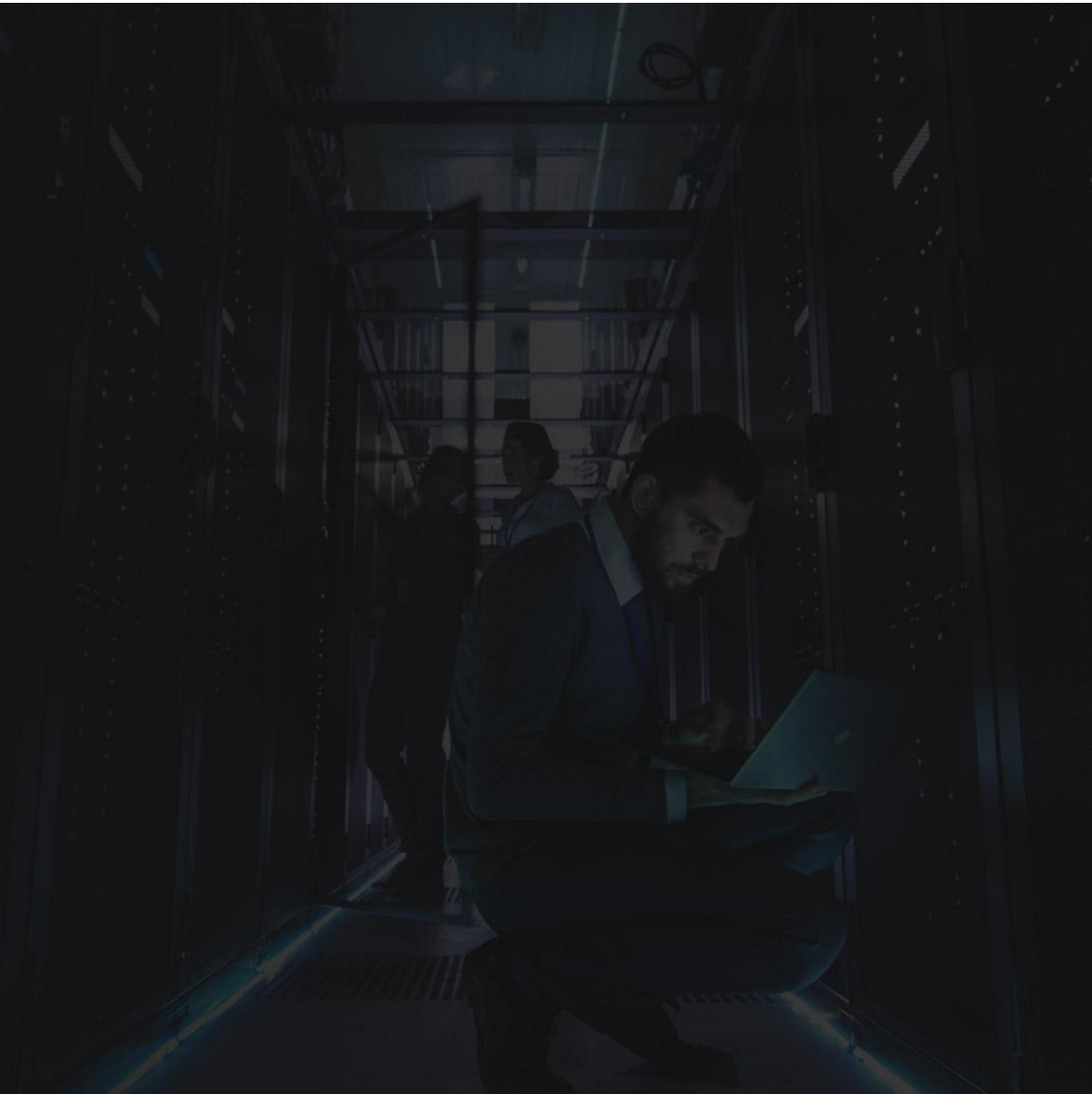
Network Cabling Technology & Troubleshooting

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Question-1

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Question-1

+ Which type of Ethernet cabling provides for the greatest distances between Ethernet nodes?

☐

A. Fiber Cabling

☐

B. Copper Cabling

☐

C. STP Cabling

☐

D. UTP Cabling

☐

E. Simplex Cabling

ANSWER

+ Which type of Ethernet cabling provides for the greatest distances between Ethernet nodes?

+ [1.3.a]



A. Fiber Cabling



B. Copper Cabling



C. STP Cabling



D. UTP Cabling



E. Simplex Cabling



Question-2

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Question-2

- + Which of the following IEEE standards requires the use of fiber-optic cabling?
- + [1.3.a]

☐

A. 802.3u

☐

B. 802.3z

☐

C. 802.3ab

☐

D. 802.3an

☐

E. None of these answers are correct

ANSWER

- + Which of the following IEEE standards requires the use of fiber-optic cabling?
- + [1.3.a]

☐

A. 802.3u

☒

B. 802.3z

☐

C. 802.3ab

☐

D. 802.3an

☐

E. None of these answers are correct



Question-3

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Question-3

+ When viewing an informal IEEE standard name (like 10BASE-??) what letter in that name indicates that the standard utilizes copper cabling?

+ [1.3.a]

☐

A. X

☐

B. V

☐

C. T

☐

D. P

☐

E. None of these answers are correct

ANSWER

+ When viewing an informal IEEE standard name (like 10BASE-??) what letter in that name indicates that the standard utilizes copper cabling?

+ [1.3.a]

☐

A. X

☐

B. V

☒

C. T

☐

D. P

☐

E. None of these answers are correct



Question-4

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Question-4

+ What technique, used with copper-based Ethernet cabling is used to cancel out the negative effects of crosstalk?

+ [1.3.a]

☐

A. Shielding each wire within a cable

☐

B. Using alternating frequencies on each wire within a cable

☐

C. Twisting each pair of wires within a cable around themselves

☐

D. Transmitting bits at staggered time intervals

☐

E. None of these answers are correct.

ANSWER

+ What technique, used with copper-based Ethernet cabling is used to cancel out the negative effects of crosstalk?

+ [1.3.a]

☐

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☐

B. Using alternating frequencies on each wire within a cable

☒

C. Twisting each pair of wires within a cable around themselves

☐

D. Transmitting bits at staggered time intervals

☐

E. None of these answers are correct.



Question-5

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Question-5

+ Which of the following images displays a cable using RJ-45 connectors? [1.3.b]

☐ A



☐ C



☐ B



☐ D



ANSWER

+ Which of the following images displays a cable using RJ-45 connectors? [1.3.b]

☐ A



☒ C



☐ B



☐ D





Question-6

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Question-6

- + The 10Base-T and 100Base-T IEEE standards define using a copper-based cable containing two pairs of wires (four-wires total). If this cable is a straight-thru cable, draw lines between pins to indicate which pins on the left would be connected (via wires) to which pins on the right? [1.3.b]

PIN number

1

2

3

4

5

6

7

8

PIN number

1

2

3

4

5

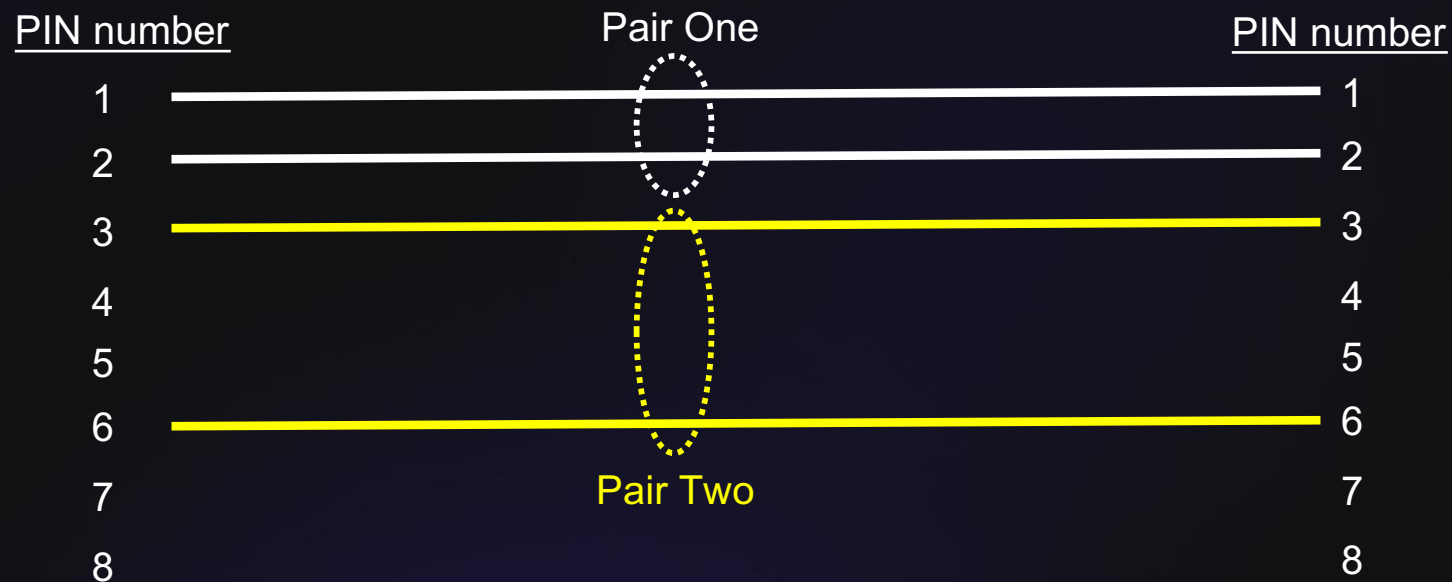
6

7

8

ANSWER

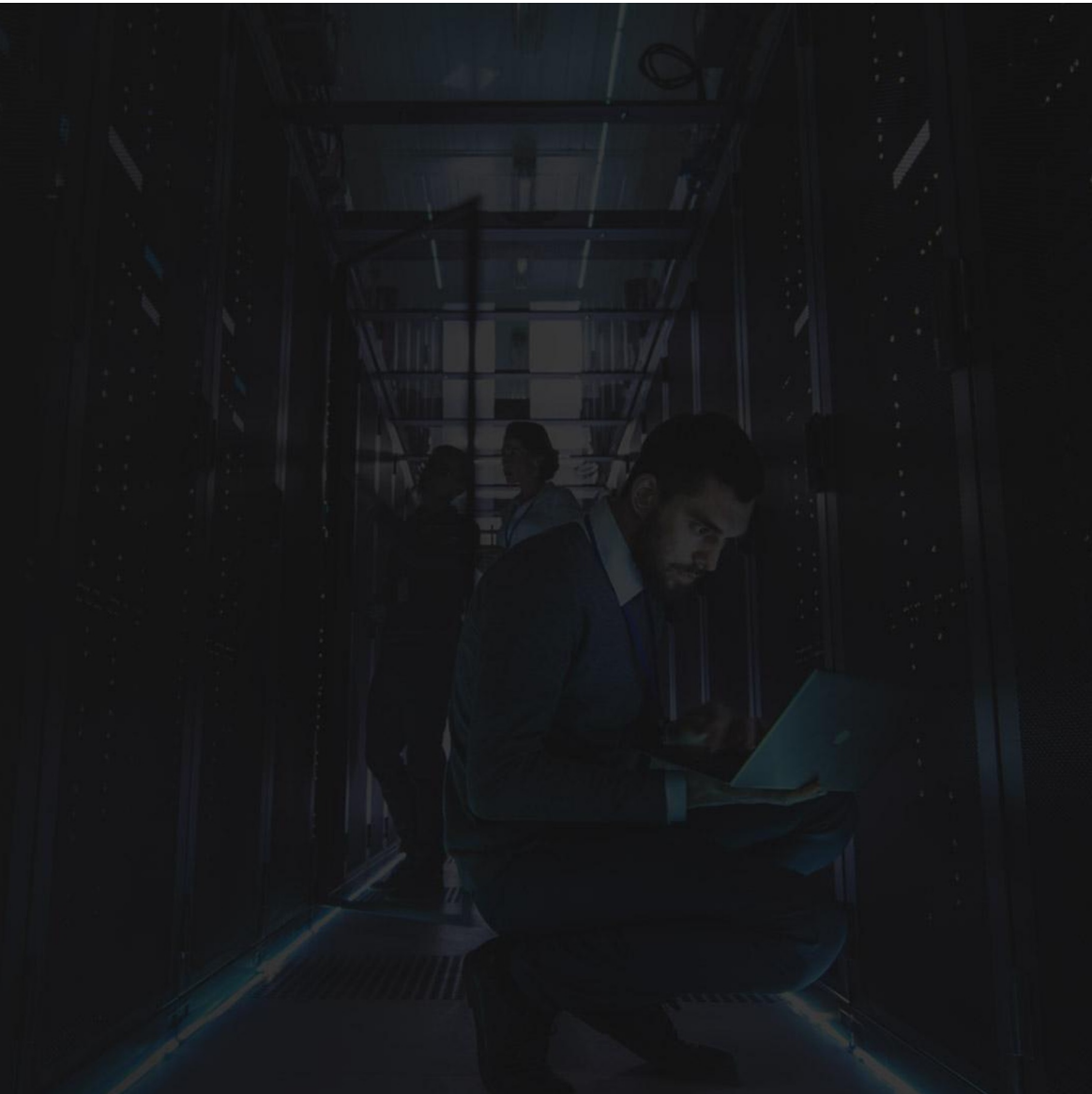
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Question-7

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Question-7

- + The 10Base-T and 100Base-T IEEE standards define using a copper-based cable containing two pairs of wires (four-wires total). If this cable is a crossover cable, draw lines between pins to indicate which pins on the left would be connected (via wires) to which pins on the right? [1.3.b]

PIN number

1

2

3

4

5

6

7

8

PIN number

1

2

3

4

5

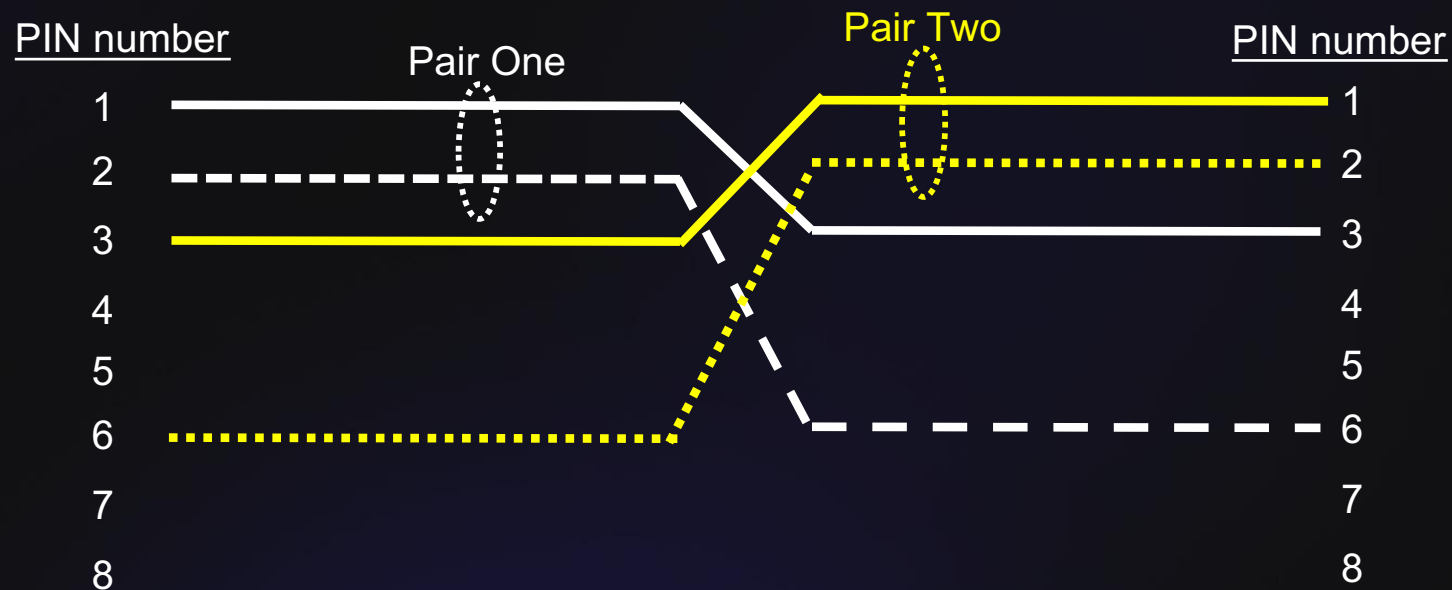
6

7

8

ANSWER

- + The 10Base-T and 100Base-T IEEE standards define using a copper-based cable containing two pairs of wires (four-wires total). If this cable is a crossover cable, draw lines between pins to indicate which pins on the left would be connected (via wires) to which pins on the right? [1.3.b]





Question-8

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Question-8

+ Which of the following answers display a pairing of nodes that, if cabled together with an Ethernet cable, would require a crossover cable to be used?

+ (Select two answers)

+ [1.3.b]

☐

A. PC to PC

☐

B. PC to Switch

☐

C. PC to Router

☐

D. Router to Switch

☐

E. Wireless Access Point to Switch

ANSWER

+ Which of the following answers display a pairing of nodes that, if cabled together with an Ethernet cable, would require a crossover cable to be used?

+ (Select two answers)

+ [1.3.b]



A. PC to PC



B. PC to Switch



C. PC to Router



D. Router to Switch

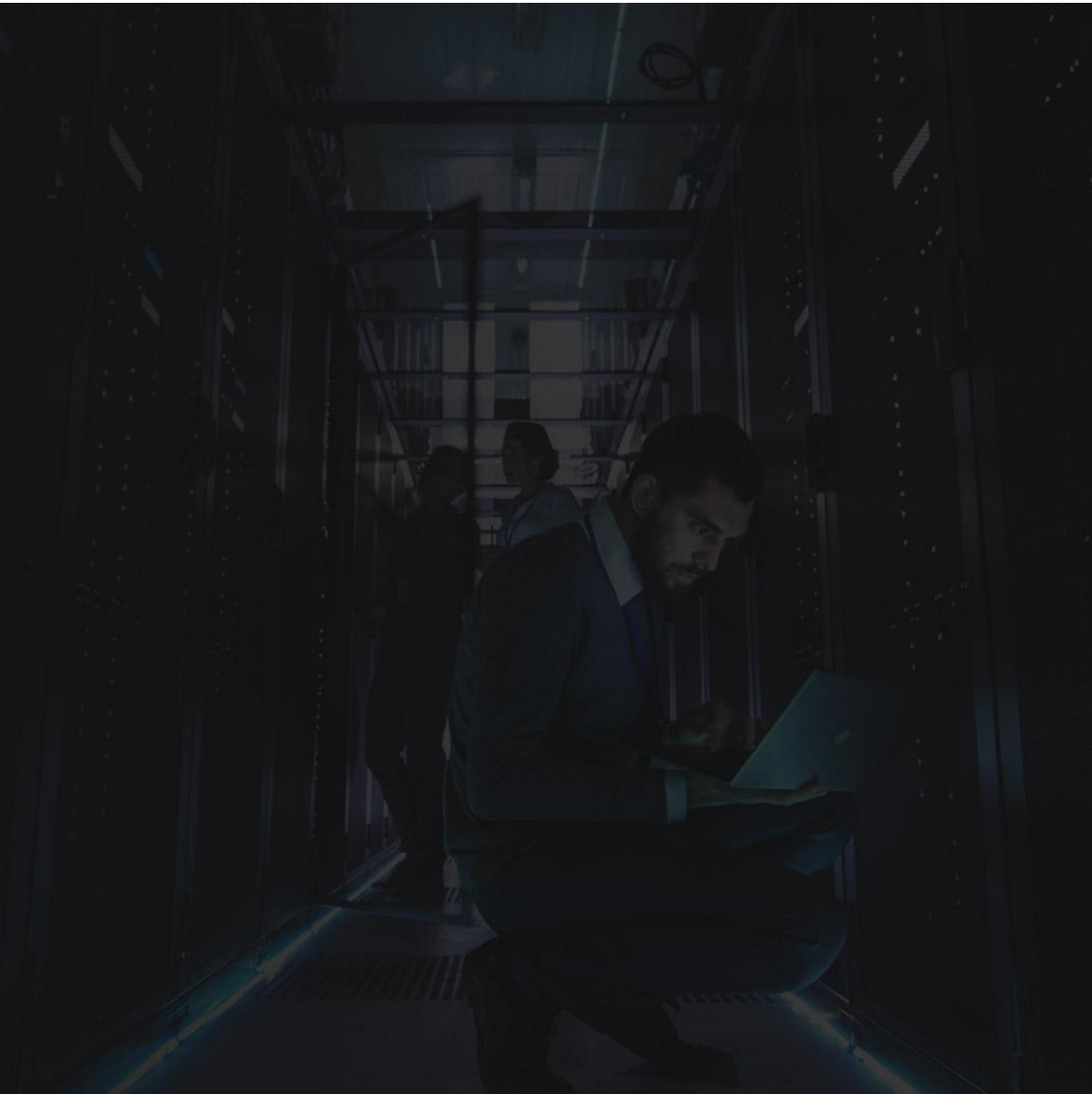


E. Wireless Access Point to Switch



Question-9

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Question-9

- + Which of the statements about MMF and SMF cables are true?
- + (Select three answers)
- + [1.3.a]

☐

A. MMF utilizes lasers as its light source.

☐

B. SMF utilizes lasers as its light source.

☐

C. MMF cabling is thinner than SMF cabling

☐

D. SMF cabling is thinner than MMF cabling

☐

E. MMF cables can transmit data for longer distances than SMF cables

☐

F. SMF cables can transmit data for longer distances than MMF cables

ANSWER

- + Which of the statements about MMF and SMF cables are true?
- + (Select three answers)
- + [1.3.a]

☐

A. MMF utilizes lasers as its light source.

☒

B. SMF utilizes lasers as its light source.

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C. MMF cabling is thinner than SMF cabling

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D. SMF cabling is thinner than MMF cabling

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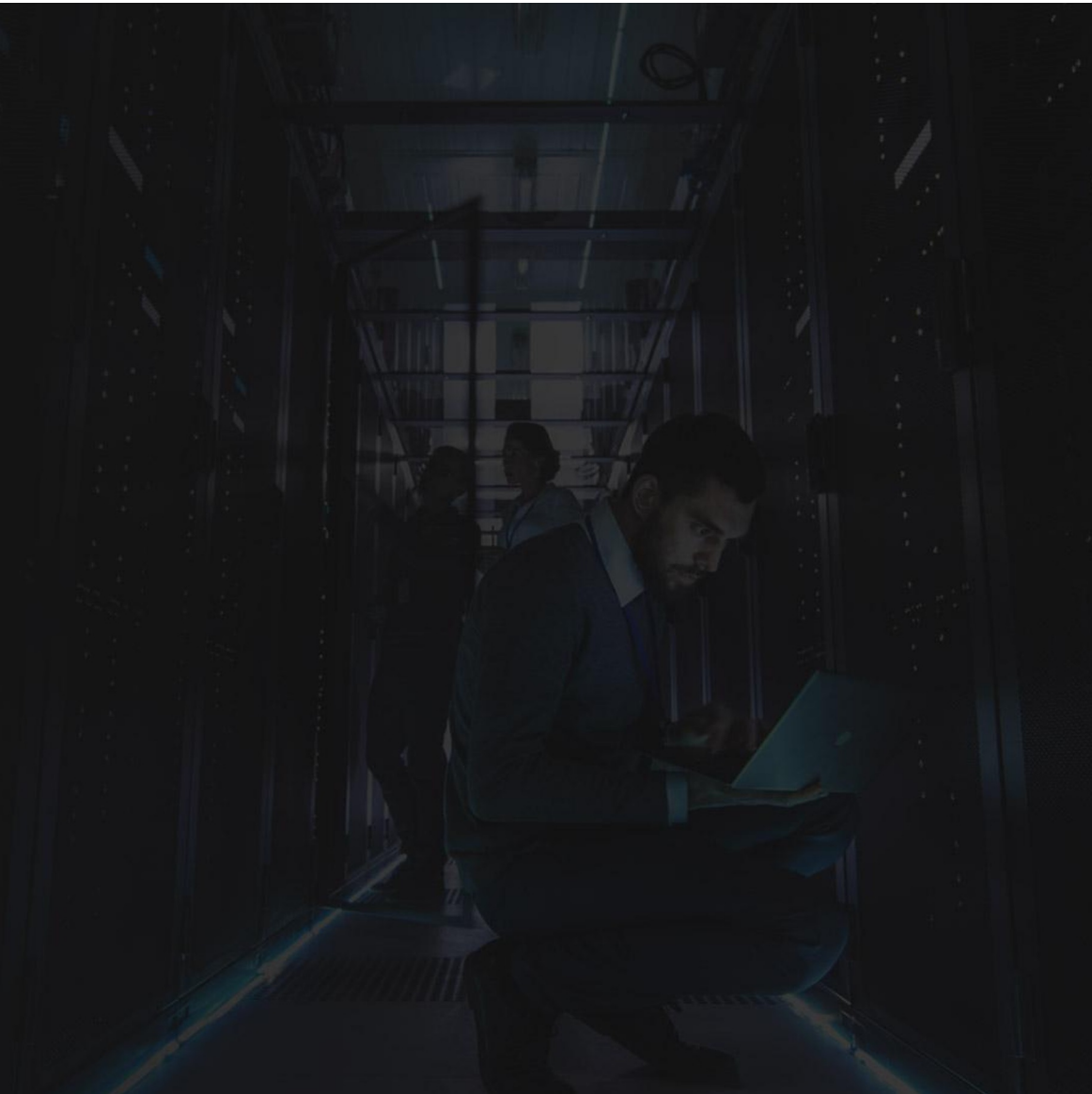
☒

F. SMF cables can transmit data for longer distances than MMF cables



Question-10

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Question-10

- + Node-A is a Cisco switch. Node-B is a Server. Both nodes are connected via an Ethernet cable and both of their NICs support 10/100Base-T Ethernet in both full-duplex and half-duplex mode.
- + If Node-A is using autonegotiation (802.3u)...and Node-B is hardcoded to Full-Duplex and 100Mbps...which of the following statements about Node-A will be true? [1.4]

☐ A. Node-A's NIC card will settle at 100Mbps and Full-Duplex

☐ C. Node-A's NIC card will settle at 10Mbps and Full-Duplex

☐ B. Node-A's NIC card will settle at 100Mbps and Half-Duplex

☐ D. Node-A's NIC card will settle at 10Mbps and Half-Duplex

ANSWER

- + Node-A is a Cisco switch. Node-B is a Server. Both nodes are connected via an Ethernet cable and both of their NICs support 10/100Base-T Ethernet in both full-duplex and half-duplex mode.
- + If Node-A is using autonegotiation (802.3u)...and Node-B is hardcoded to Full-Duplex and 100Mbps...which of the following statements about Node-A will be true? [1.4]

- | | |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <input type="checkbox"/> A. Node-A's NIC card will settle at 100Mbps and Full-Duplex | <input type="checkbox"/> C. Node-A's NIC card will settle at 10Mbps and Full-Duplex |
| <input checked="" type="checkbox"/> B. Node-A's NIC card will settle at 100Mbps and Half-Duplex | <input type="checkbox"/> D. Node-A's NIC card will settle at 10Mbps and Half-Duplex |



Question-11

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Question-11

- + Which of the following status codes would indicate that a switchport is connected to a neighboring device (such as a laptop) that has been turned off?
- + [1.4]

	Line Status	Protocol Status
A	Administratively Down	Down
B	Down	Down
C	Up	Down
D	Down	Down (err-disabled)
E	Up	Up

ANSWER

- + Which of the following status codes would indicate that a switchport is connected to a neighboring device (such as a laptop) that has been turned off?
- + [1.4]

	Line Status	Protocol Status
A	Administratively Down	Down
B	Down	Down
C	Up	Down
D	Down	Down (err-disabled)
E	Up	Up



Question-12

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Question-12

- + Which of the following status codes would indicate that a switchport is has been manually turned off via Cisco IOS configuration?
- + [1.4]

	Line Status	Protocol Status
A	Administratively Down	Down
B	Down	Down
C	Up	Down
D	Down	Down (err-disabled)
E	Up	Up

ANSWER

- + Which of the following status codes would indicate that a switchport is has been manually turned off via Cisco IOS configuration?
- + [1.4]

	Line Status	Protocol Status
A	Administratively Down	Down
B	Down	Down
C	Up	Down
D	Down	Down (err-disabled)
E	Up	Up



Question-13

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Question-13

+ Which of the following statements are true about a switch interface that shows an interface status of “err-disabled”?

+ (Select two answers)

+ [1.4]

☐

A. The interface can receive and transmit frames.

☐

B. The interface cannot receive or transmit frames.

☐

C. A feature on that interface has detected a problem.

☐

D. A required feature on the interface is missing from the configuration.

☐

E. The interface is connected to a bad cable.

ANSWER

- + Which of the following statements are true about a switch interface that shows an interface status of “err-disabled”?
- + (Select two answers)
- + [1.4]

☐

A. The interface can receive and transmit frames.

☒

B. The interface cannot receive or transmit frames.

☒

C. A feature on that interface has detected a problem.

☐

D. A required feature on the interface is missing from the configuration.

☐

E. The interface is connected to a bad cable.



Question-14

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Question-14

+ Which of the following statements is true about the Cisco IOS command output shown here?

+ [1.4]

```
5 minute input rate 181000 bits/sec, 109 packets/sec  
5 minute output rate 174000 bits/sec, 112 packets/sec  
31458 packets input, 7048796 bytes  
Received 0 broadcasts, 1350 runs, 0 giants, 0 throttles  
1350 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored  
0 watchdog, 0 multicast
```

☐ A. The switch has received many frames that are smaller than the legal minimum Ethernet frame size

☐ B. The switch has received many frames that are larger than the legal maximum Ethernet frame size

☐ C. The switch is not receiving watchdog frames which is considered an input error

☐ D. The switch is not receiving CRC frames which is considered an input error

ANSWER

+ Which of the following statements is true about the Cisco IOS command output shown here?

+ [1.4]

```
5 minute input rate 181000 bits/sec, 109 packets/sec  
5 minute output rate 174000 bits/sec, 112 packets/sec  
31458 packets input, 7048796 bytes  
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A. The switch has received many frames that are smaller than the legal minimum Ethernet frame size



B. The switch has received many frames that are larger than the legal maximum Ethernet frame size



C. The switch is not receiving watchdog frames which is considered an input error

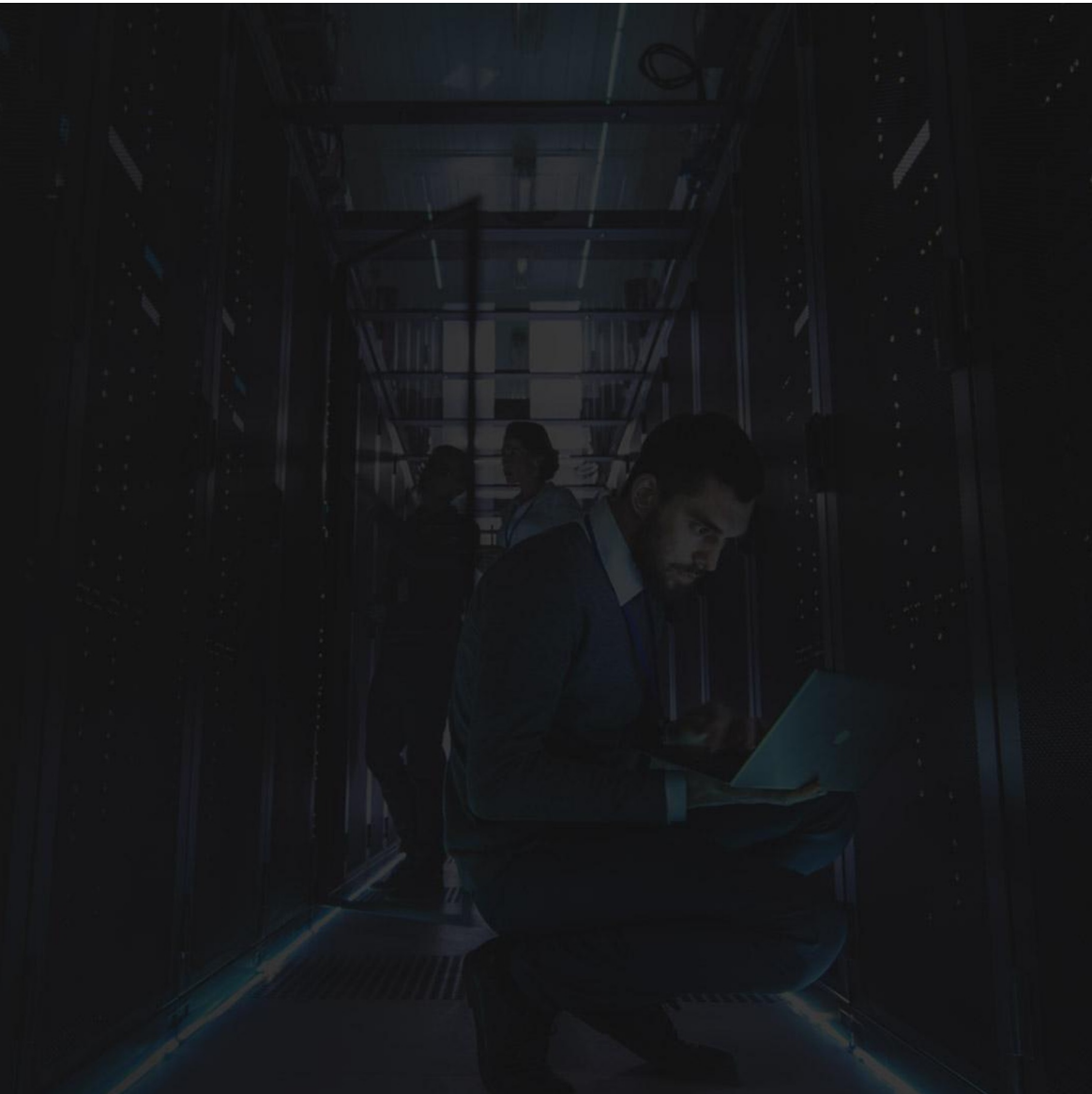


D. The switch is not receiving CRC frames which is considered an input error



Question-15

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Question-15

- + Which of the following statements about Ethernet collisions are true?
- + (Select two answers)
- + [1.4]

- ☐ A. They occur when the NIC on one side of a cable is running at 10Mbps and the other, connected NIC is running at 100Mbps
- ☐ B. They can only occur on Full-Duplex links
- ☐ C. They can only occur on Half-Duplex links
- ☐ D. It is normal to see some of them on Half-Duplex links
- ☐ E. It is normal to see some of them on Full-Duplex links

ANSWER

- + Which of the following statements about Ethernet collisions are true?
- + (Select two answers)
- + [1.4]

- ☐ A. They occur when the NIC on one side of a cable is running at 10Mbps and the other, connected NIC is running at 100Mbps
- ☐ B. They can only occur on Full-Duplex links
- ☒ C. They can only occur on Half-Duplex links
- ☒ D. It is normal to see some of them on Half-Duplex links
- ☐ E. It is normal to see some of them on Full-Duplex links



Question-16

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Question-16

+ What name is given to an Ethernet frame that has exceeded the maximum legal frame size and is considered an error?

+ [1.4]

☐

A. Giant

☐

B. Obese

☐

C. Rogue

☐

D. Oversized

☐

E. Jumbo

ANSWER

+ What name is given to an Ethernet frame that has exceeded the maximum legal frame size and is considered an error?

+ [1.4]



A. Giant



B. Obese



C. Rogue



D. Oversized



E. Jumbo



Thanks for Watching!