

## CCNA 1 Chapter 4 v5.0 Exam Answers 2015 (100%)

**1. Which layer of the OSI model is responsible for specifying the encapsulation method used for specific types of media?**

- application
- transport
- **data link**
- physical

**2. Which statement describes signaling at the physical layer?**

- **Sending the signals asynchronously means that they are transmitted without a clock signal.**
- In signaling, a 1 always represents voltage and a 0 always represents the absence of voltage.
- Wireless encoding includes sending a series of clicks to delimit the frames.
- Signaling is a method of converting a stream of data into a predefined code

**3. What are two reasons for physical layer protocols to use frame encoding techniques? (Choose two.)**

- to reduce the number of collisions on the media
- **to distinguish data bits from control bits**
- to provide better media error correction
- **to identify where the frame starts and ends**
- to increase the media throughput

**4. The throughput of a FastEthernet network is 80 Mb/s. The traffic overhead for establishing sessions, acknowledgments, and encapsulation is 15 Mb/s for the same time period. What is the goodput for this network?**

- 15 Mb/s
- 95 Mb/s
- 55 Mb/s
- **65 Mb/s**
- 80 Mb/s

**5. A network administrator notices that some newly installed Ethernet cabling is carrying corrupt and distorted data signals. The new cabling was installed in the ceiling close to fluorescent lights and electrical equipment. Which two factors may interfere with the copper cabling and result in signal distortion and data corruption? (Choose two.)**

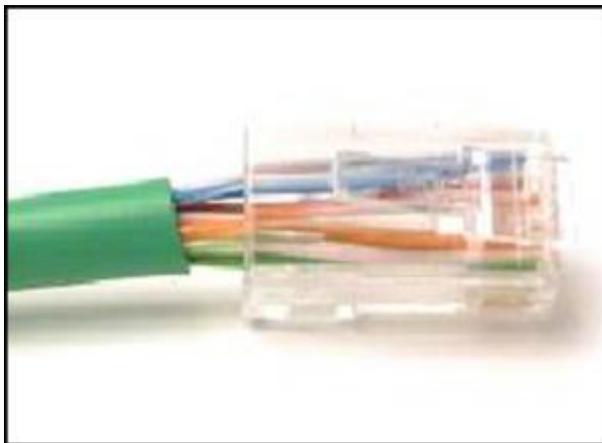
- **EMI**
- crosstalk

- RFI?
- signal attenuation
- extended length of cabling

**6. How is the magnetic field cancellation effect enhanced in UTP cables?**

- by increasing the thickness of the PVC sheath that encases all the wires
- **by increasing and varying the number of twists in each wire pair**
- by increasing the thickness of the copper wires
- by decreasing the number of wires that are used to carry data

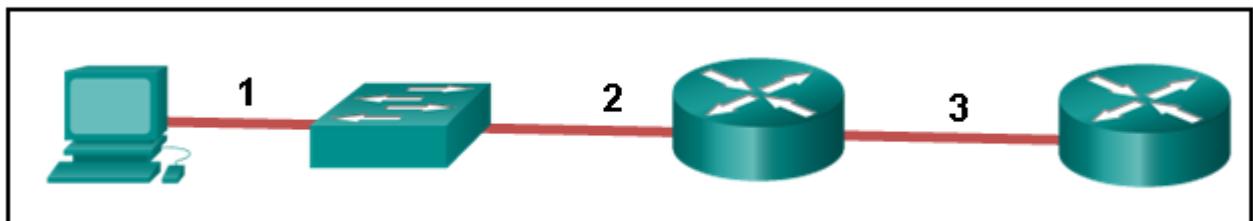
**7. Refer to the exhibit. What is wrong with the displayed termination?**



*CCNA 1 Chapter 4 Exam Answer 001 (v5.02, 2015)*

- The jack used is an RJ-11 connector instead of an RJ-45 connector.
- The cable is not shielded.
- **The untwisted length of each wire is too long.**
- The wires are too thick for the connector that is used.

**8. Refer to the exhibit. The PC is connected to the console port of the switch. All the other connections are made through FastEthernet links. Which types of UTP cables can be used to connect the devices??**



*CCNA 1 Chapter 4 Exam Answer 002 (v5.02, 2015)*

- 1 – rollover, 2 – crossover, 3 – straight-through
- **1 – rollover, 2 – straight-through, 3 – crossover**
- 1 – crossover, 2 – straight-through, 3 – rollover
- 1 – crossover, 2 – rollover, 3 – straight-through

**9. Which statement is correct about multimode fiber?**

- Multimode fiber cables carry signals from multiple connected sending devices.
- Multimode fiber commonly uses a laser as a light source.
- **SC-SC patch cords are used with multimode fiber cables.**
- Multimode fiber has a thinner core than single-mode fiber..

**10. What is one advantage of using fiber optic cabling rather than copper cabling?**

- It is usually cheaper than copper cabling.
- It is able to be installed around sharp bends.
- It is easier to terminate and install than copper cabling.
- **It is able to carry signals much farther than copper cabling.**

**11. Why are two strands of fiber used for a single fiber optic connection?**

- The two strands allow the data to travel for longer distances without degrading.
- They prevent crosstalk from causing interference on the connection.
- They increase the speed at which the data can travel.
- **They allow for full-duplex connectivity.**

**12. A network administrator is designing the layout of a new wireless network. Which three areas of concern should be accounted for when building a wireless network? (Choose three.)**

- mobility options
- **security**
- **interference**
- **coverage area**
- extensive cabling
- packet collision

**13. A network administrator is required to upgrade wireless access to end users in a building. To provide data rates up to 1.3 Gb/s and still be backward compatible with older devices, which wireless standard should be implemented?**

- 802.11n

- 802.11ac
- 802.11g
- 802.11b

#### 14. What is one main characteristic of the data link layer?

- It generates the electrical or optical signals that represent the 1 and 0 on the media.
- It converts a stream of data bits into a predefined code.
- It shields the upper layer protocol from being aware of the physical medium to be used in the communication.
- It accepts Layer 3 packets and decides the path by which to forward a frame to a host on a remote network.

#### 15. As data travels on the media in a stream of 1s and 0s how does a receiving node identify the beginning and end of a frame??

- The transmitting node inserts start and stop bits into the frame.
- The transmitting node sends a beacon to notify that a data frame is attached.
- The receiving node identifies the beginning of a frame by seeing a physical address.
- The transmitting node sends an out-of-band signal to the receiver about the beginning of the frame.

#### 16. What is true concerning physical and logical topologies?

- The logical topology is always the same as the physical topology.
- Physical topologies are concerned with how a network transfers frames.
- Physical topologies display the IP addressing scheme of each network.
- Logical topologies determine the media access control method used.

#### 17. What are two characteristics of 802.11 wireless networks? (Choose two.)

- They use CSMA/CA technology.
- They use CSMA/CD technology.
- They are collision-free networks.
- Stations can transmit at any time.
- Collisions can exist in the networks.

#### 18. What is the purpose of the FCS field in a frame?

- to obtain the MAC address of the sending node
- to verify the logical address of the sending node
- to compute the CRC header for the data field
- to determine if errors occurred in the transmission and reception

#### 19. Fill in the blank with a number.

10,000,000,000 b/s can also be written as **10 Gb/s**.

20. Fill in the blank.

The term **bandwidth** indicates the capacity of a medium to carry data and it is typically measured in kilobits per second (kb/s) or megabits per second (Mb/s).?

21. Fill in the blank.

What acronym is used to reference the data link sublayer that identifies the network layer protocol encapsulated in the frame? **LLC**