CCNA 1 Chapter 4 2016 v5.1 Answers 100%

1. 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

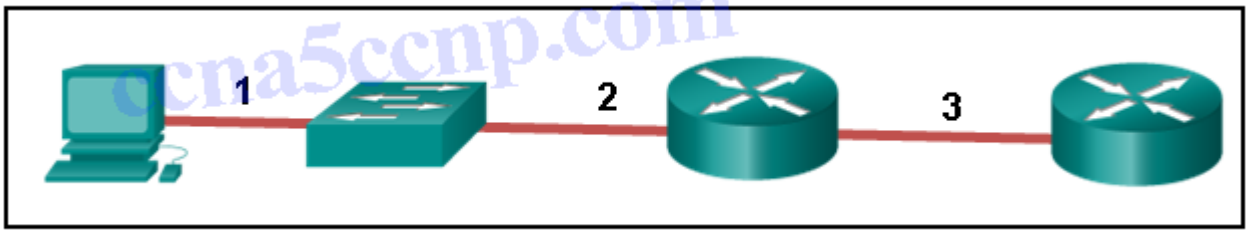
2. What is indicated by the term throughput?
- the guaranteed data transfer rate offered by an ISP
- the capacity of a particular medium to carry data
- the measure of the usable data transferred across the media
- **the measure of the bits transferred across the media over a given period of time**
- the time it takes for a message to get from sender to receiver

3. 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

4. Which characteristic describes crosstalk?
- the distortion of the network signal from fluorescent lighting
- **the distortion of the transmitted messages from signals carried in adjacent wires**
- the weakening of the network signal over long cable lengths
- the loss of wireless signal over excessive distance from the access point

5. What technique is used with UTP cable to help protect against signal interference from crosstalk?
- **twisting the wires together into pairs**
- wrapping a foil shield around the wire pairs
- encasing the cables within a flexible plastic sheath
- terminating the cable with special grounded connectors

6. 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?



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- 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

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

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- The woven copper braid should not have been removed.
- The wrong type of connector is being used.
- **The untwisted length of each wire is too long.**
- The wires are too thick for the connector that is used.

8. Which type of connector does a network interface card use?
- DIN
- PS-2
- RJ-11
- **RJ-45**

9. 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.**

10. 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.**

11. 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

12. Which layer of the OSI model is responsible for specifying the encapsulation method used for specific types of media?
- application
- transport
- **data link**
- physical

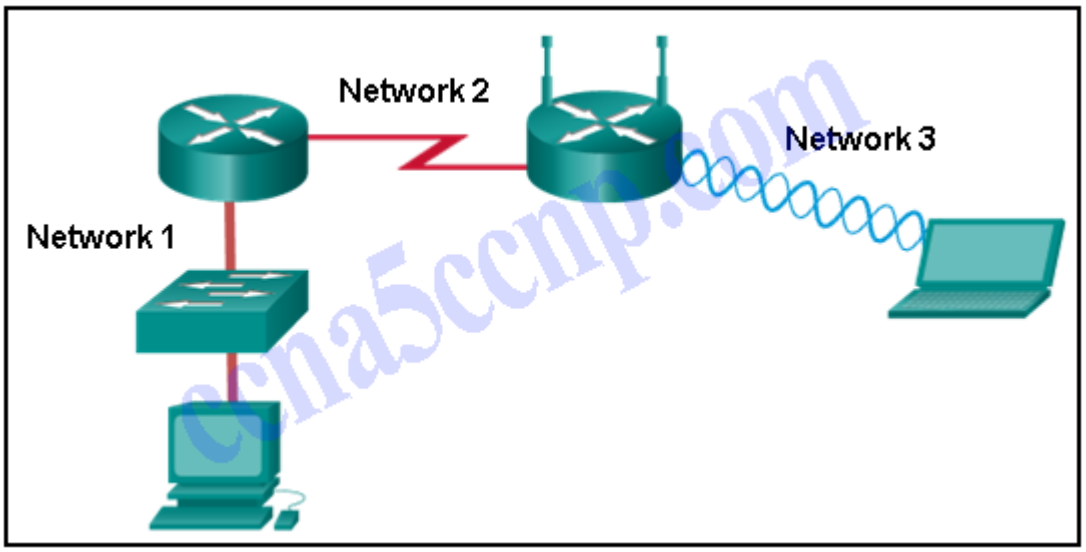
13. What are two services performed by the data link layer of the OSI model? (Choose two.)
- It encrypts data packets.
- It determines the path to forward packets.
- **It accepts Layer 3 packets and encapsulates them into frames.**
- **It provides media access control and performs error detection.**
- It monitors the Layer 2 communication by building a MAC address table.

14. 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 refer to how a network transfers data between devices.**

15. Which method of data transfer allows information to be sent and received at the same time?
- full duplex
- half duplex
- multiplex
- simplex

16. Which statement describes an extended star topology?
- End devices connect to a central intermediate device, which in turn connects to other central intermediate devices.
- End devices are connected together by a bus and each bus connects to a central intermediate device.
- Each end system is connected to its respective neighbor via an intermediate device.
- All end and intermediate devices are connected in a chain to each other.

17. Refer to the exhibit. Which statement describes the media access control methods that are used by the networks in the exhibit?



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- All three networks use CSMA/CA
- None of the networks require media access control.
- Network 1 uses CSMA/CD and Network 3 uses CSMA/CA.
- Network 1 uses CSMA/CA and Network 2 uses CSMA/CD.
- Network 2 uses CSMA/CA and Network 3 uses CSMA/CD.

18. What is contained in the trailer of a data-link frame?
- logical address
- physical address
- data

- error detection

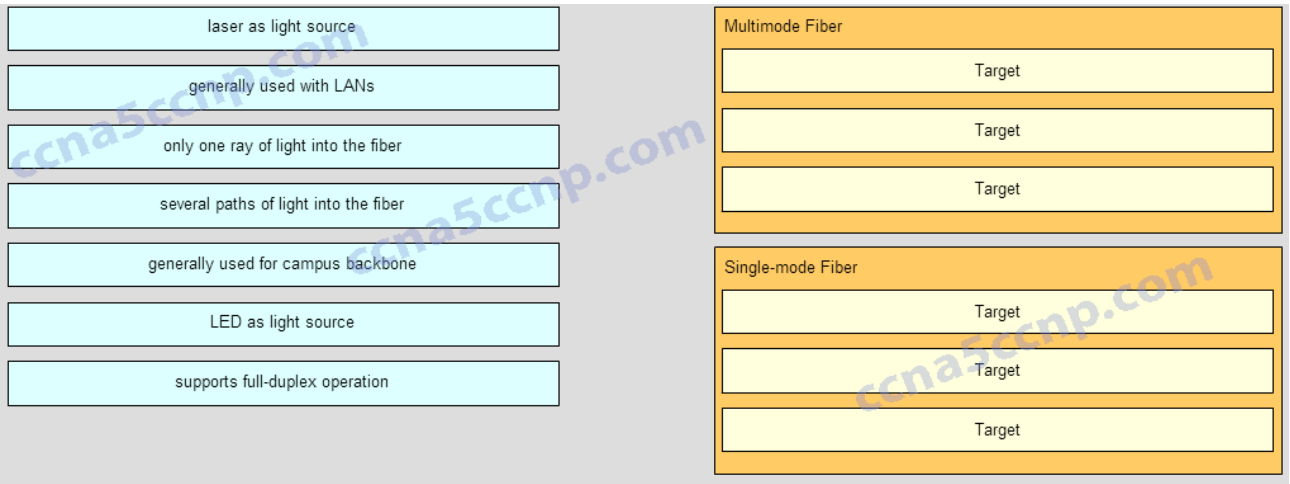
19. As data travels on the media in a stream of 1s and 0s how does a receiving node identify the beginning and end of a frame?
- The transmitting node inserts start and stop bits into the frame.
- The transmitting node sends a beacon to notify that a data frame is attached.
- The receiving node identifies 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.

20. What is the function of the CRC value that is found in the FCS field of a frame?
- to verify the integrity of the received frame
- to verify the physical address in the frame
- to verify the logical address in the frame
- to compute the checksum header for the data field in the frame

21. 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).

22. 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

23. Match the characteristics to the correct type of fiber. (Not all options are used.)
- Question



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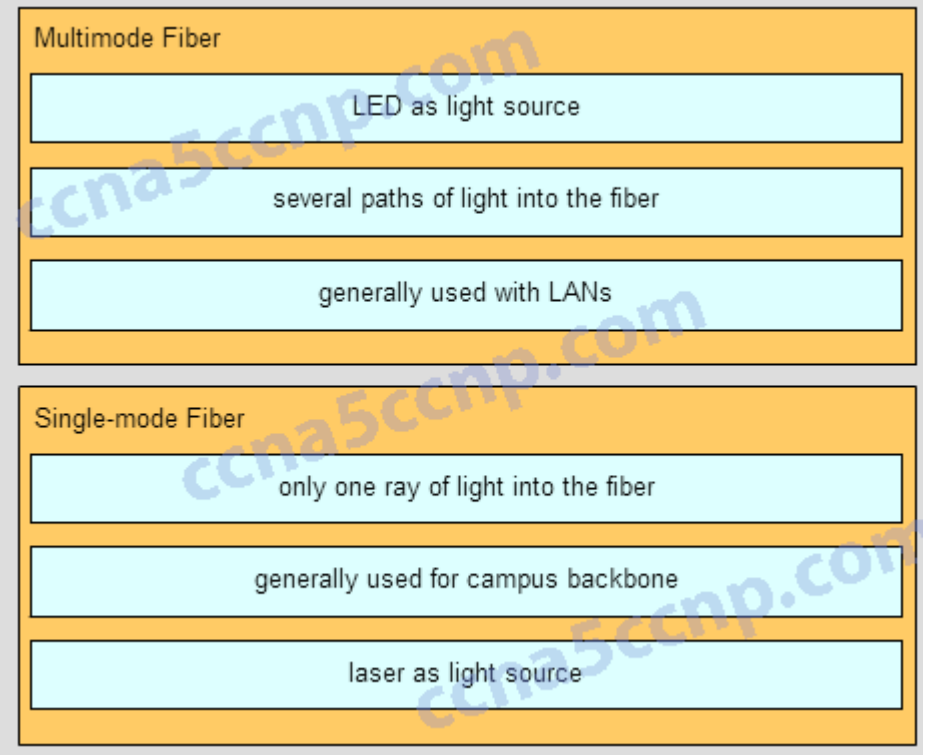
- Answer



CCNA1 Chapter 4 v5.1 001 Answer