

**When a collision occurs in a network using CSMA/CD, how do hosts with data to transmit respond after the backoff period has expired?**

- ☒ The hosts return to a listen-before-transmit mode.
  - ☐ The hosts creating the collision have priority to send data.
  - ☐ The hosts creating the collision retransmit the last 16 frames.
  - ☐ The hosts extend their delay period to allow for rapid transmission.
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**2**

**What are the two dynamic methods used to maintain ARP tables? (Choose two.)**

- ☐ monitor traffic on the local segment
  - ☐ monitor traffic on the local and remote segments
  - ☐ send a Layer 2 broadcast containing an ARP request
  - ☐ send a Layer 3 broadcast containing an ARP request
- 

**3**

**Convert the binary number 10111010 into its hexadecimal equivalent. Select the correct answer from the list below.**

- ☐ 85
  - ☐ 90
  - ☒ BA
  - ☐ A1
  - ☐ B3
  - ☐ 1C
- 

**4**

Interface: 192.168.1.17 --- 0x8		
Interface Address	Physical Address	Type
192.168.1.1	00-01-5c-22-4f-c2	dynamic
192.168.1.27	00-10-b4-8c-10-9f	dynamic

**Refer to the exhibit. What command was executed on a host computer to produce the results shown?**

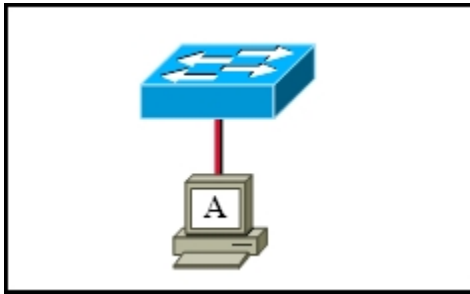
- ☐ route PRINT
  - ☒ arp -a
  - ☐ arp -d
  - ☐ netstat
  - ☐ telnet
- 

**5**

**What are the two basic functions of the ARP protocol? (Choose two.)**

- ☐ resolve known IPv6 addresses to MAC addresses
- ☐ resolve known MAC to IP addresses
- ☐ maintain ARP cache in RAM
- ☐ resolve known IPv4 addresses to MAC addresses

6



*Refer to the exhibit. The switch and workstation are administratively configured for full-duplex operation. Which statement accurately reflects the operation of this link?*

- ☒ No collisions will occur on this link.
- ☐ Only one of the devices can transmit at a time.
- ☐ The switch will have priority for transmitting data.
- ☐ The devices will default back to half duplex if excessive collisions occur.

7

*Why do hosts on an Ethernet segment that experience a collision use a random delay before attempting to transmit a frame?*

- ☐ A random delay is used to ensure a collision-free link.
- ☐ A random delay value for each device is assigned by the manufacturer.
- ☐ A standard delay value could not be agreed upon among networking device vendors.
- ☒ A random delay helps prevent the stations from experiencing another collision during the transmission.

8

*Which statements correctly describe MAC addresses? (Choose three.)*

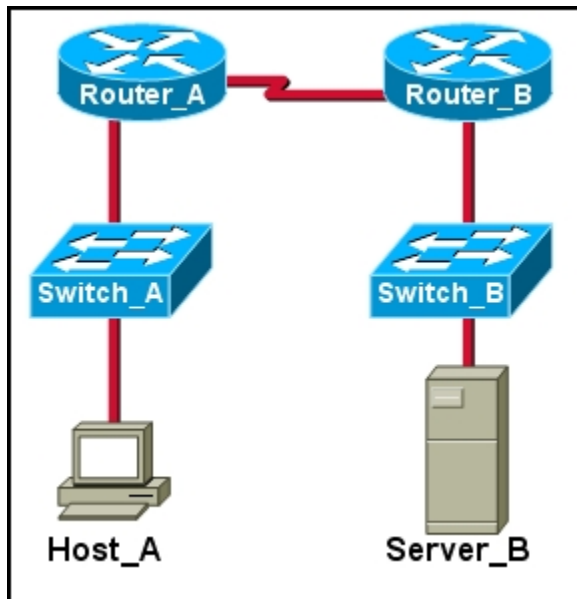
- ☐ dynamically assigned
- ☒ copied into RAM during system startup
- ☐ layer 3 address
- ☒ contains a 3 byte OUI
- ☒ 6 bytes long
- ☐ 32 bits long

9

*Ethernet operates at which layers of the OSI model? (Choose two.)*

- ☐ Network layer
- ☐ Transport layer
- ☒ Physical layer
- ☐ Application layer
- ☐ Session layer
- ☒ Data-link layer

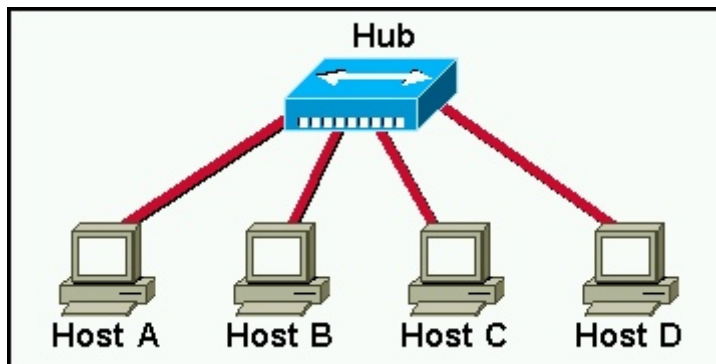
10



Refer to the exhibit. Host\_A is attempting to contact Server\_B. Which statements correctly describe the addressing Host\_A will generate in the process? (Choose two.)

- ☐ A packet with the destination IP of Router\_B.
- ☐ A frame with the destination MAC address of Switch\_A.
- ☐ A packet with the destination IP of Router\_A.
- ☒ A frame with the destination MAC address of Router\_A.
- ☒ A packet with the destination IP of Server\_B.
- ☐ A frame with the destination MAC address of Server\_B.

11



In the graphic, Host A has reached 50% completion in sending a 1 KB Ethernet frame to Host D when Host B wishes to transmit its own frame to Host C. What must Host B do?

- ☐ Host B can transmit immediately since it is connected on its own cable segment.
- ☐ Host B must wait to receive a CSMA transmission from the hub, to signal its turn.
- ☐ Host B must send a request signal to Host A by transmitting an interframe gap.
- ☒ Host B must wait until it is certain that Host A has completed sending its frame.

12

After an Ethernet collision, when the backoff algorithm is invoked, which device has priority to transmit data?

- ☒ the device involved in the collision with the lowest MAC address

- ☐ the device involved in the collision with the lowest IP address
  - ☐ any device in the collision domain whose backoff timer expires first
  - ☐ those that began transmitting at the same time
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**13**

***Which of the following is a drawback of the CSMA/CD access method?***

- ☐ Collisions can decrease network performance.
  - ☐ It is more complex than non-deterministic protocols.
  - ☐ Deterministic media access protocols slow network performance.
  - ☐ CSMA/CD LAN technologies are only available at slower speeds than other LAN technologies.
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**14**

***What does the IEEE 802.2 standard represent in Ethernet technologies?***

- ☐ MAC sublayer
  - ☐ Physical layer
  - ☐ Logical Link Control sublayer
  - ☐ Network layer
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**15**

***Which of the following describe interframe spacing? (Choose two.)***

- ☒ the minimum interval, measured in bit-times, that any station must wait before sending another frame
  - ☐ the maximum interval, measured in bit-times, that any station must wait before sending another frame
  - ☐ the 96-bit payload padding inserted into a frame to achieve a legal frame size
  - ☐ the 96-bit frame padding transmitted between frames to achieve proper synchronization
  - ☒ the time allowed for slow stations to process a frame and prepare for the next frame
  - ☐ the maximum interval within which a station must send another frame to avoid being considered unreachable
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