CCNA 1 Chapter 5 2016 v5.1 Answers 100%

1. **What happens to runt frames received by a Cisco Ethernet switch?**
    o   **The frame is dropped.**
    o   The frame is returned to the originating network device.
    o   The frame is broadcast to all other devices on the same network.
    o   The frame is sent to the default gateway.

2. **What are the two sizes (minimum and maximum) of an Ethernet frame? (Choose two.)**
    o   56 bytes
    o   **64 bytes**
    o   128 bytes
   o   1024 bytes
    o   **1518 bytes**

3. **What statement describes Ethernet?**
    o   **It defines the most common LAN type in the world.**
    o   It is the required Layer 1 and 2 standard for Internet communication.
    o   It defines a standard model used to describe how networking works.
    o   It connects multiple sites such as routers located in different countries.

4. **Which two statements describe features or functions of the logical link control sublayer in Ethernet standards? (Choose two.)**
    o   **Logical link control is implemented in software.**
    o   Logical link control is specified in the IEEE 802.3 standard.
    o   The LLC sublayer adds a header and a trailer to the data.
    o   **The data link layer uses LLC to communicate with the upper layers of the protocol suite.**
    o   The LLC sublayer is responsible for the placement and retrieval of frames on and off the media.

5. **What statement describes a characteristic of MAC addresses?**
    o   **They must be globally unique.**
    o   They are only routable within the private network.
    o   They are added as part of a Layer 3 PDU.
    o   They have a 32-bit binary value.

6. **Which statement is true about MAC addresses?**
    o   MAC addresses are implemented by software.
    o   A NIC only needs a MAC address if connected to a WAN.
    o   **The first three bytes are used by the vendor assigned OUI.**
    o   The ISO is responsible for MAC addresses regulations.

7. **Which destination address is used in an ARP request frame?**
   o **0.0.0.0**
   o **255.255.255.255**
   o **FFFF.FFFF.FFFF**
   o **127.0.0.1**
   o **01-00-5E-00-AA-23**

8. **What addressing information is recorded by a switch to build its MAC address table?**
   o **the destination Layer 3 address of incoming packets**
   o **the destination Layer 2 address of outgoing frames**
   o **the source Layer 3 address of outgoing packets**
   o **the source Layer 2 address of incoming frames**

9. **Refer to the exhibit. The exhibit shows a small switched network and the contents of the MAC address table of the switch. PC1 has sent a frame addressed to PC3. What will the switch do with the frame?**
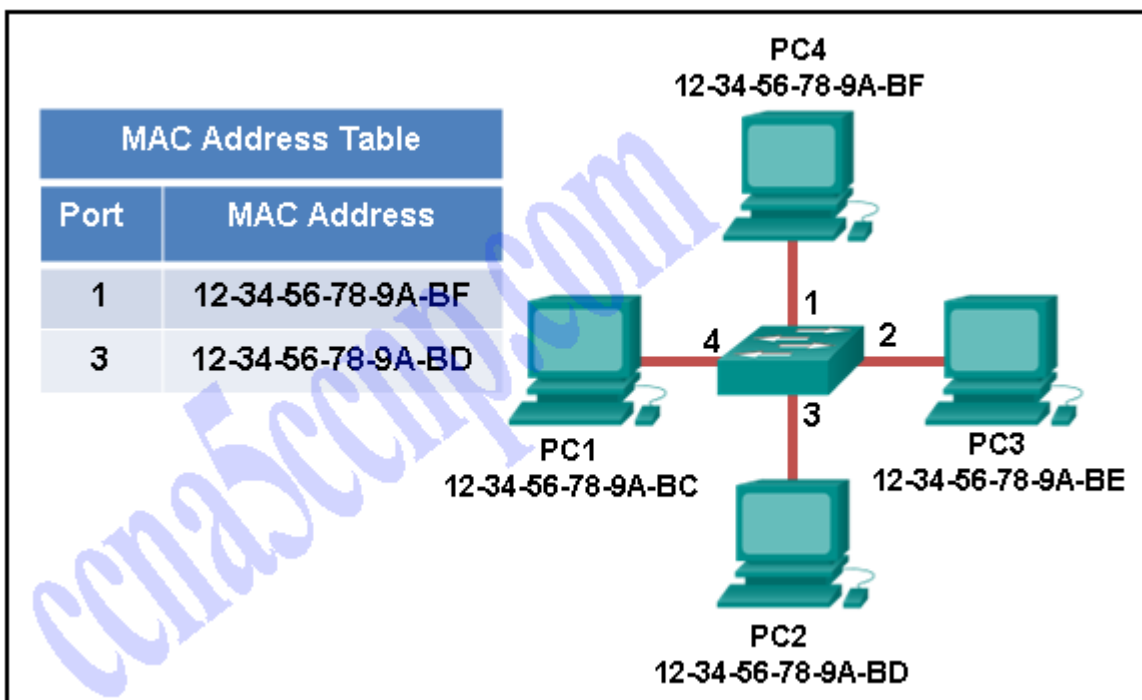
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   o **The switch will discard the frame.**
   o **The switch will forward the frame only to port 2.**
   o **The switch will forward the frame to all ports except port 4.**
   o **The switch will forward the frame to all ports.**
   o **The switch will forward the frame only to ports 1 and 3.**

10. **Which switching method uses the CRC value in a frame?**

- ○ **cut-through**
- ○ **fast-forward**
- ○ **fragment-free**
- ○ **store-and-forward**

11. **What is auto-MDIX?**
- ○ **a type of Cisco switch**
- ○ **an Ethernet connector type**
- ○ **a type of port on a Cisco switch**
- ○ **a feature that detects Ethernet cable type**

12. **True   or   False?**
    When a device is sending data to another device on a remote network, the Ethernet frame is sent to the MAC address of the default gateway.
- ○ **true**
- ○ **false**

13. **The ARP table in a switch maps which two types of address together?**
- ○ **Layer 3 address to a Layer 2 address**
- ○ **Layer 3 address to a Layer 4 address**
- ○ **Layer 4 address to a Layer 2 address**
- ○ **Layer 2 address to a Layer 4 address**

14. **Refer to the exhibit. PC1 issues an ARP request because it needs to send a packet to PC2. In this scenario, what will happen next?**
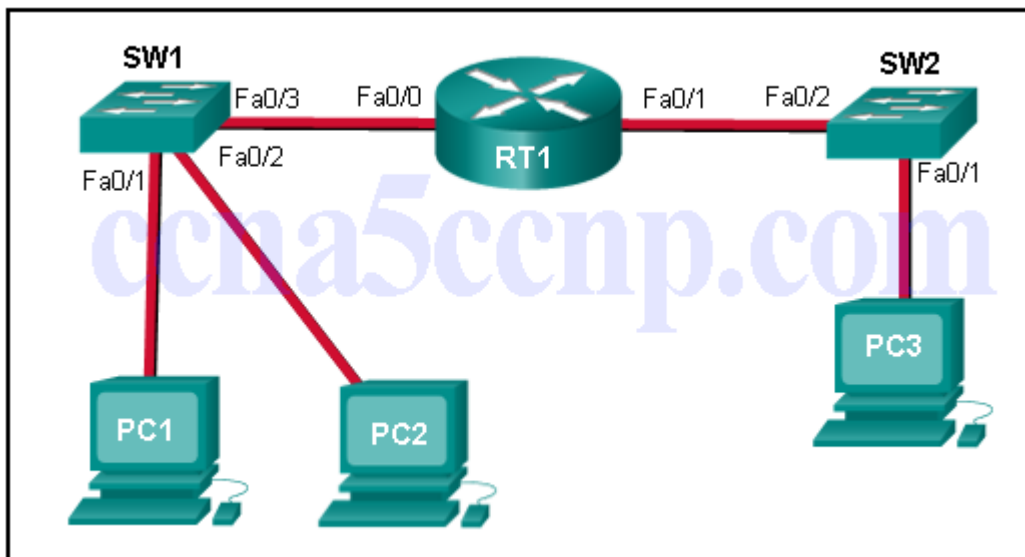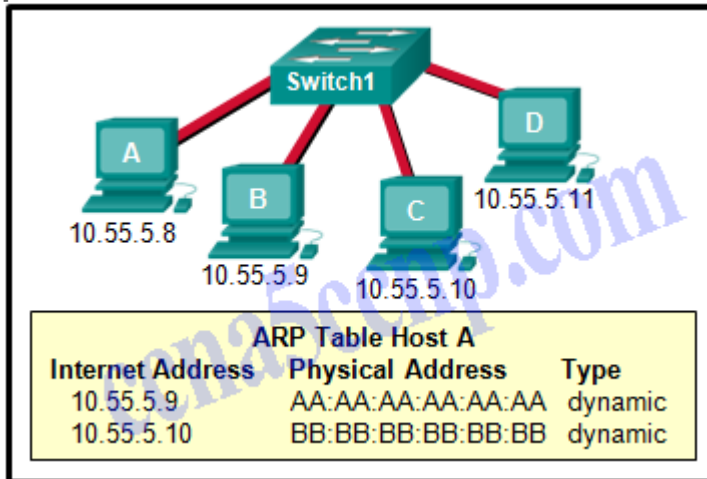

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- ○ **PC2 will send an ARP reply with its MAC address.**
- ○ **RT1 will send an ARP reply with its Fa0/0 MAC address.**

o   **RT1 will send an ARP reply with the PC2 MAC address.**
o   **SW1 will send an ARP reply with the PC2 MAC address.**
o   **SW1 will send an ARP reply with its Fa0/1 MAC address.**

15. Refer to the exhibit. A switch with a default configuration connects four hosts. The ARP table for host A is shown. What happens when host A wants to send an IP packet to host D?

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o   **Host A sends an ARP request to the MAC address of host D.**
o   **Host D sends an ARP request to host A.**
o   **Host A sends out the packet to the switch. The switch sends the packet only to the host D, which in turn responds.**
o   **Host A sends out a broadcast of FF:FF:FF:FF:FF:FF. Every other host connected to the switch receives the broadcast and host D responds with its MAC address.**

16. Refer to the exhibit. The switches are in their default configuration. Host A needs to communicate with host D, but host A does not have the MAC address for its default gateway. Which network hosts will receive the ARP request sent by host A?
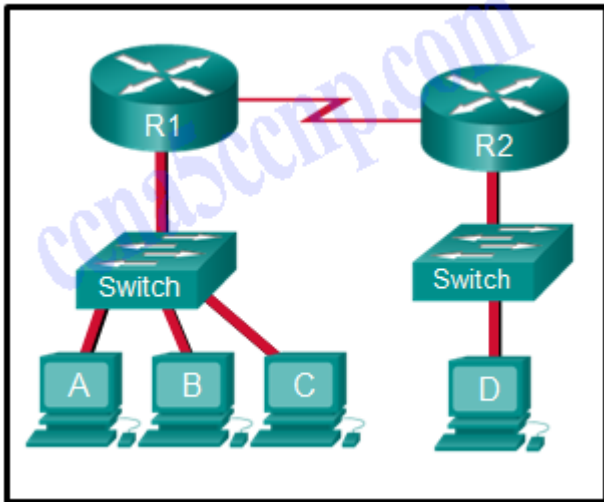
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o **only host D**
o **only router R1**
o **only hosts A, B, and C**
o **only hosts A, B, C, and D**
o **only hosts B and C**
o **only hosts B, C, and router R1**

17. **Which statement describes the treatment of ARP requests on the local link?**
o **They must be forwarded by all routers on the local network.**
o **They are received and processed by every device on the local network.**
o **They are dropped by all switches on the local network.**
o **They are received and processed only by the target device.**

18. **What are two potential network problems that can result from ARP operation? (Choose two.)**
o **Manually configuring static ARP associations could facilitate ARP poisoning or MAC address spoofing.**
o **On large networks with low bandwidth, multiple ARP broadcasts could cause data communication delays.**
o **Network attackers could manipulate MAC address and IP address mappings in ARP messages with the intent of intercepting network traffic.**
o **Large numbers of ARP request broadcasts could cause the host MAC address table to overflow and prevent the host from communicating on the network.**
o **Multiple ARP replies result in the switch MAC address table containing entries that match the MAC addresses of hosts that are connected to the relevant switch port.**

19. Fill   in   the   blank.
    A collision fragment, also known as a **RUNT** frame, is a frame of fewer than 64 bytes in length.

20. Fill   in   the   blank.
    On a Cisco switch, **port-based** memory buffering is used to buffer frames in queues linked to specific incoming and outgoing ports.

21. Fill   in   the   blank.
    ARP **spoofing** is a technique that is used to send fake ARP messages to other hosts in the LAN. The aim is to associate IP addresses to the wrong MAC addresses.

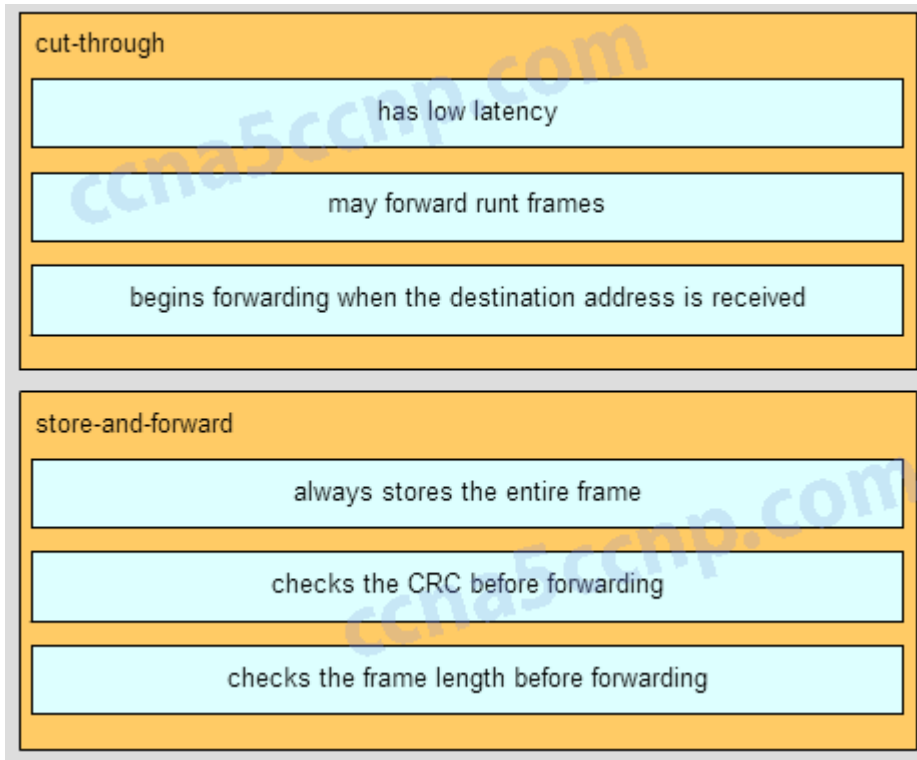22. Match the characteristic to the forwarding method. (Not all options are used.)
    o **Question**

Match the characteristic to the forwarding method. (Not all options are used.)

	cut-through
always stores the entire frame	Target
checks the CRC before forwarding	Target
checks the frame length before forwarding	Target
does not forward broadcasts	store-and-forward
has low latency	Target
may forward runt frames	Target
begins forwarding when the destination address is received	Target

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o **Answer**

cut-through
has low latency
may forward runt frames
begins forwarding when the destination address is received

store-and-forward
always stores the entire frame
checks the CRC before forwarding
checks the frame length before forwarding

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