Module 1 Ch 5 Exam

1 Which statement is true about MAC addresses?

- MAC addresses are implemented by software.
- A NIC only needs a MAC address if connected to a WAN.
- The first three bytes are used by the vendor assigned OUI.
- The ISO is responsible for MAC addresses regulations.

2 What is a characteristic of a contention-based access method?

- It processes more overhead than the controlled access methods do.
- It has mechanisms to track the turns to access the media.
- It is a nondeterministic method.
- It scales very well under heavy media use.

3 Which two statements describe features or functions of the logical link control sublayer i Ethernet standards? (Choose two.)

- Logical link control is implemented in software.
- Logical link control is specified in the IEEE 802.3 standard.
- The LLC sublayer interacts directly with the NIC driver software.
- The data link layer uses LLC to communicate with the upper layers of the protocol suite.
- The LLC sublayer is responsible for the placement and retrieval of frames on and off the media.

4 What is the purpose of the preamble in an Ethernet frame?

- is used as a padding for data
- is used for timing synchronization
- is used to identify the source address
- is used to identify the destination address

5 What is the Layer 2 multicast MAC address that corresponds to the Layer 3 IPv4 multica address 224.139.34.56?

- 00-00-00-0B-22-38
- 01-00-5E-0B-22-38
- 01-5E-00-0B-22-38
- FE-80-00-0B-22-38

- FF-FF-FF-0B-22-38

6 Which two statements are correct about MAC and IP addresses during data transmissio NAT is not involved? (Choose two.)

- A packet that has crossed four routers has changed the destination IP address four times.
- Destination MAC addresses will never change in a frame that goes across seven routers.
- Destination and source MAC addresses have local significance and change every time a frame goes from one LAN to anoth
- Destination IP addresses in a packet header remain constant along the entire path to a target host.
- Every time a frame is encapsulated with a new destination MAC address, a new destination IP address is needed.

7 What are two features of ARP? (Choose two.)

- If a host is ready to send a packet to a local destination device and it has the IP address but not the MAC address of the desti generates an ARP broadcast.
- An ARP request is sent to all devices on the Ethernet LAN and contains the IP address of the destination host and its multicas address.
- When a host is encapsulating a packet into a frame, it refers to the MAC address table to determine the mapping of IP addres MAC addresses.
- If no device responds to the ARP request, then the originating node will broadcast the data packet to all devices on the netwo segment.
- If a device receiving an ARP request has the destination IPv4 address, it responds with an ARP reply.

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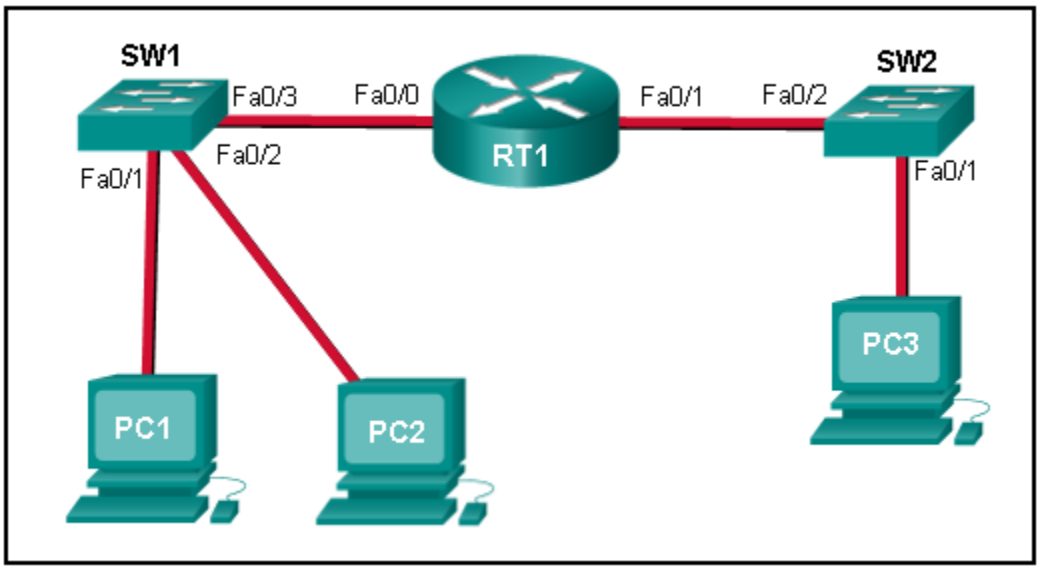

Refer to the exhibit. I issues an ARP request because it needs to send a packet to PC2. In this scenario, wha happen next?

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

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

9 A host is trying to send a packet to a device on a remote LAN segment, but there are currently no mappings in its ARP cache. How will the device obtain a destination MAC address?

- It will send an ARP request for the MAC address of the destination device.
- It will send an ARP request for the MAC address of the default gateway.
- It will send the frame and use its own MAC address as the destination.
- It will send the frame with a broadcast MAC address.
- It will send a request to the DNS server for the destination MAC address.

10 What are two potential network problems that can result from ARP operation? (Choose

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

11 A network administrator is connecting two modern switches using a straight-through cab The switches are new and have never been configured. Which three statements are co about the final result of the connection? (Choose three.)

- The link between the switches will work at the fastest speed that is supported by both switches.
- The link between switches will work as full-duplex.
- If both switches support different speeds, they will each work at their own fastest speed.
- The auto-MDIX feature will configure the interfaces eliminating the need for a crossover cable.
- The connection will not be possible unless the administrator changes the cable to a crossover cable.
- The duplex capability has to be manually configured because it cannot be negotiated.

12 A Layer 2 switch is used to switch incoming frames from a 1000BASE-T port to a port connected to a 100Base-T network. Which method of memory buffering would work bes this task?

- port-based buffering
- level 1 cache buffering

- shared memory buffering
- fixed configuration buffering

13 When would a switch record multiple entries for a single switch port in its MAC address table?

- when a router is connected to the switch port
- when multiple ARP broadcasts have been forwarded
- when another switch is connected to the switch port
- when the switch is configured for Layer 3 switching

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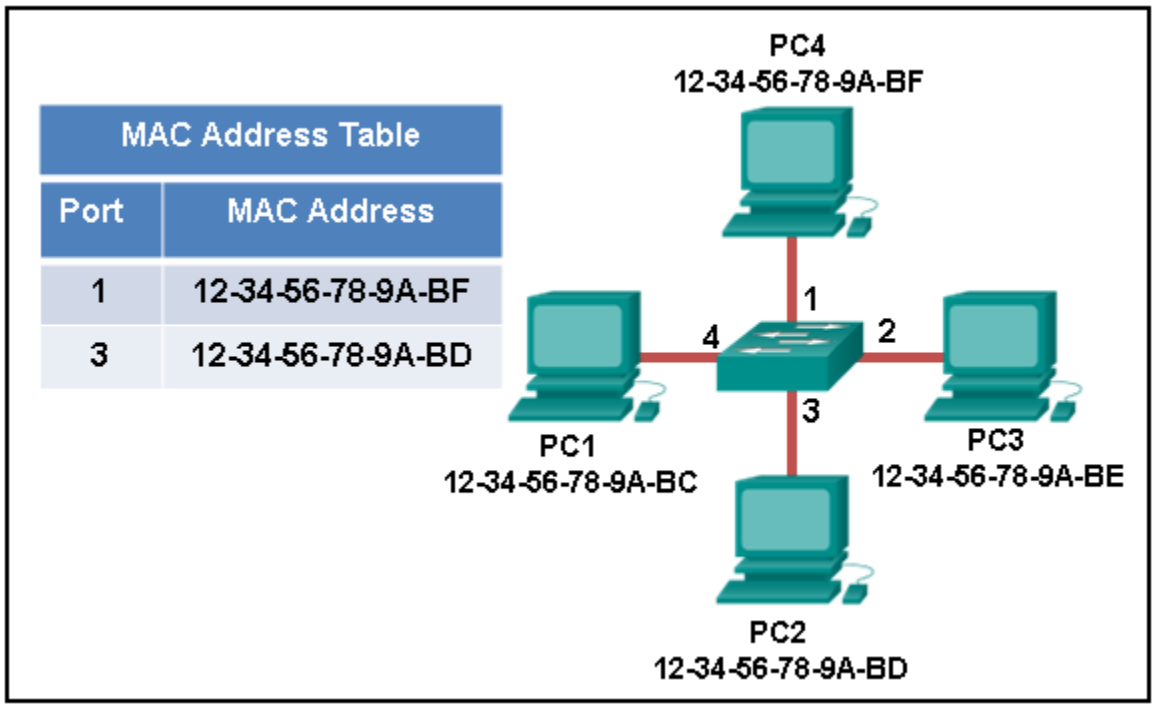

Refer to the exhibit. The exhibit shows a small switched network and the contents of the MAC address table of the switch. PC1 has sent a frame addressed to PC3. What will the switch do with the frame?

- The switch will discard the frame.
- The switch will forward the frame only to port 2.
- The switch will forward the frame to all ports except port 4.
- The switch will forward the frame to all ports.
- The switch will forward the frame only to ports 1 and 3.

15 Which two statements describe a fixed configuration Ethernet switch? (Choose two.)

- [ ] The switch cannot be configured with multiple VLANs.
- [ ] An SVI cannot be configured on the switch.
- [ ] A fixed configuration switch may be stackable.
- [ ] The number of ports on the switch cannot be increased.
- [ ] The port density of the switch is determined by the Cisco IOS.

16 How does adding an Ethernet line card affect the form factor of a switch?

- by increasing the back plane switching speed
- by expanding the port density
- by making the switch stackable
- by expanding the NVRAM capacity

17 A network administrator issues the following commands on a Layer 3 switch:

```
DLS1(config)# interface f0/3
DLS1(config-if)# no switchport
DLS1(config-if)# ip address 172.16.0.1 255.255.255.0
DLS1(config-if)# no shutdown
DLS1(config-if)# end
```

What is the administrator configuring?

- a routed port
- a switched virtual interface
- a Cisco Express Forwarding instance
- a trunk interface

18 Which address or combination of addresses does a Layer 3 switch use to make forwarc decisions?

- IP address only
- port address only
- MAC address only
- MAC and port addresses
- MAC and IP addresses

19 What statement illustrates a drawback of the CSMA/CD access method?

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