Cisco CCIE Routing and Switching Written Exam

1. Lafayette Productions is looking for a new ISP that has improved availability, load balancing, and catastrophe protection. Which type of ISP connectivity solution would be best?

A. Single run

B. Multi-homed

C. Stub domain EBGP

D. Direct BGP peering

Answer(s): B

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2. Net Flow provides valuable information about network users and applications, peak usage times, and traffic routing. Which function is of Net Flow?

A. Monitor configuration changes

B. Monitor CPU utilization

C. Monitor link utilization

D. Generate traps for failure conditions

Answer(s): C

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3. The P4S company is deploying OSPF on a point-to-multipoint Frame Relay network. The remote sites needn??t to communicate with each other and there are a relatively small number of sites (scaling is not a concern). How to configure OSPF for this topology in order to minimize the additional routing information injected into the network and keep the configuration size and complexity to a minimum?

A. Configure the link as OSPF no broadcast and manually configure each of the remote sites as a neighbor.

B. Configure the link as OSPF broadcast and configure the hub router to always be the designated router.

C. Configure the link as OSPF broadcast and configure a mesh group towards the remote routers.

D. Configure the link at the hub router as OSPF point-to-multipoint and at the remote routers asOSPF point-to-point.

Answer(s): B

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4. What is high availability?

A. Redundant infrastructure

B. Clustering of computer systems

C. Reduced MTBF

D. Continuous operation of computing systems

Answer(s): D

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5. What is the way that an OSPF ABR uses to prevent summary route information from beingreadvertised from an area into the network core (Area 0)?

A. It advertises only inter-area summaries to the backbone.

B. It uses poison reverse and split horizon.

C. It only sends locally originated summaries to the backbone.

D. It compares the area number on the summary LSA to the local area.

Answer(s): C

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6. Connecting an IS-IS router to four links and redistributing 75 routes from RIP. How many LSPs will be originated by this router?

A. One LSP: containing the router information, internal routes, and external routes

B. Six LSPs: one for each link, one containing router information, and one containing external routing information

C. Two LSPs: one containing router information and internal routes and one containing external routes

D. Three LSPs: one containing all links, one containing router information, and one containing external routing information

Answer(s): A

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7. According to the network in this exhibit, traffic directed towards 10.1.5.1 arrives at P4S-R4. Which path will the traffic take from here?

A. It will take P4S-R2.

B. It will not take any path. P4S-R4 will drop the traffic.

C. It will take P4S-R3.

D. It will load share between P4S-R2 and P4S-R3.

Answer(s): A

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8. You are the Cisco Network Designer in P4S. Which two characteristics are most typical of a SAN? (Choose two.)

- [ ] A. NICs are used for network connectivity.
- [ ] B. Servers request specific blocks of data.
- [ ] C. Storage devices are directly connected to servers.
- [ ] D. A fabric is used as the hardware for connecting servers to storage devices.

Answer(s): B D

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9. The IGP next-hop reach ability for a BGP route is lost but a default route is available. Assuming that BGP connectivity is maintained, what will happen to the BGP route?

A. It will be put in a hold-down state by BGP until the next hop has been updated.

B. It will be removed from the BGP table.

C. It will be considered a valid route.

D. It will be considered invalid for traffic forwarding.

Answer(s): C

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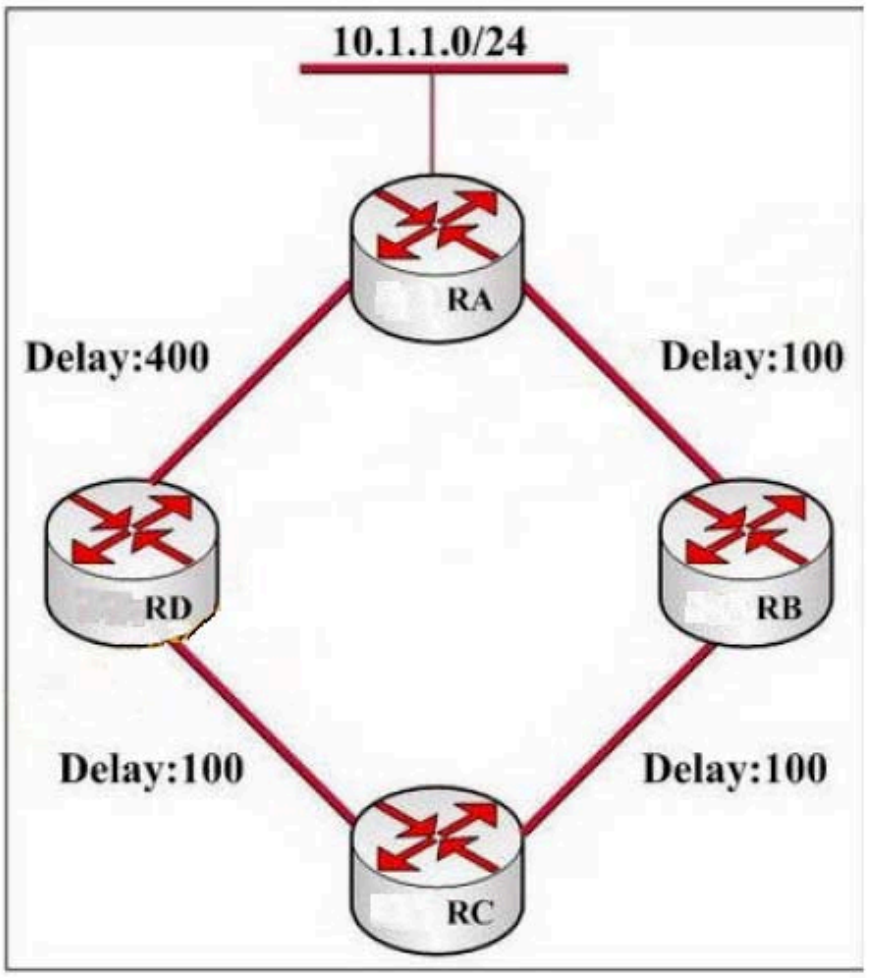
10. In the network presented in the following exhibit, all routers are configured to perform EIGRP on all interfaces. All interface bandwidths are set to 1000, and the delays are configured as displayed. In the topology table at Router P4S-RC, you see only one path towards 10.1.1.0/24. Why Router

P4S-RC only has one path in its topology table?



A. Router P4S-RB is not advertising 10.1.1.0/24 to Router P4S-RC due to split horizon.

B. Router P4S-RD is not advertising 10.1.1.0/24 to Router P4S-RC because Router P4S-RC is its feasible successor.

C. Router P4S-RD is not advertising 10.1.1.0/24 to Router P4S-RC due to split horizon.

D. Router P4S-RB is not advertising 10.1.1.0/24 to Router P4S-RC because Router P4S-RC is its feasible successor.

Answer(s): C

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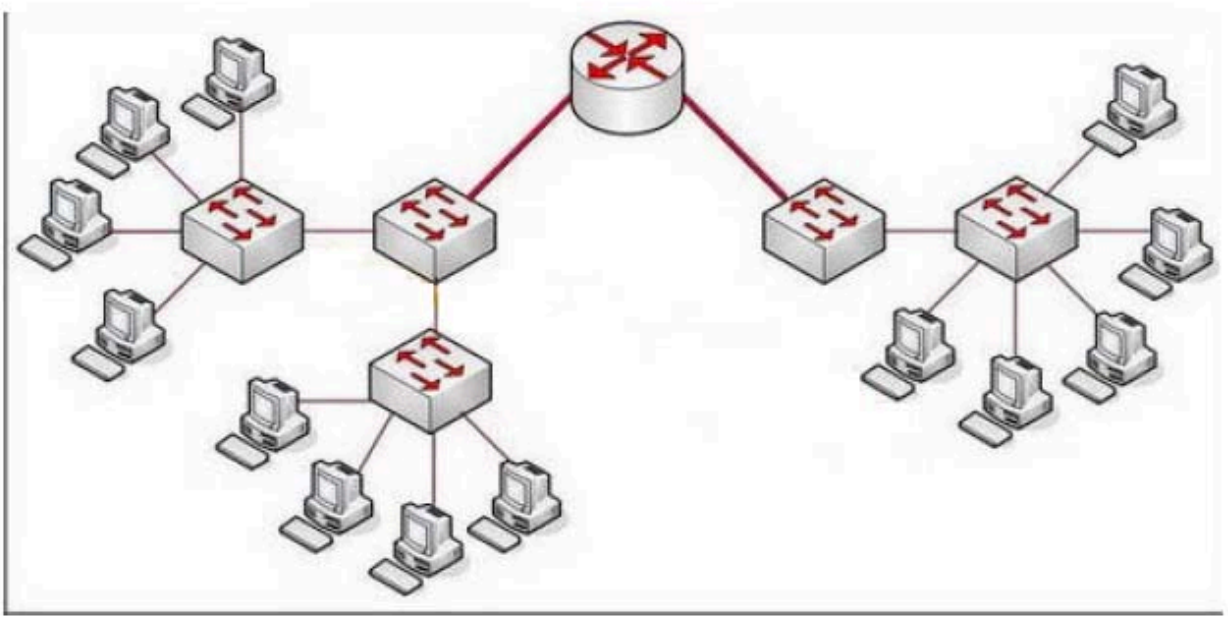
11. How many broadcast segments are contained in this network according to the exhibit?



A. 1

B. 2

C. 4

D. 5

Answer(s): B

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12. Which VPN management feature would be considered to ensure that the network had the least disruption of service when making topology changes?

A. Dynamic reconfiguration

B. Path MTU discovery

C. Auto setup

D. Remote management

Answer(s): A

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13. What information can you get from TCP flags while assessing an attack?

A. Source of the attack

B. Type of attack

C. Target of the attack

D. Priority of the attack traffic

Answer(s): B

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14. Which two steps can be taken by the sinkhole technique? (Choose two.)

- [ ] A. Reverse the direction of an attack
- [ ] B. Redirect an attack away from its target
- [ ] C. Monitor attack noise, scans, and other activity
- [ ] D. Delay an attack from reaching its target

Answer(s): B C

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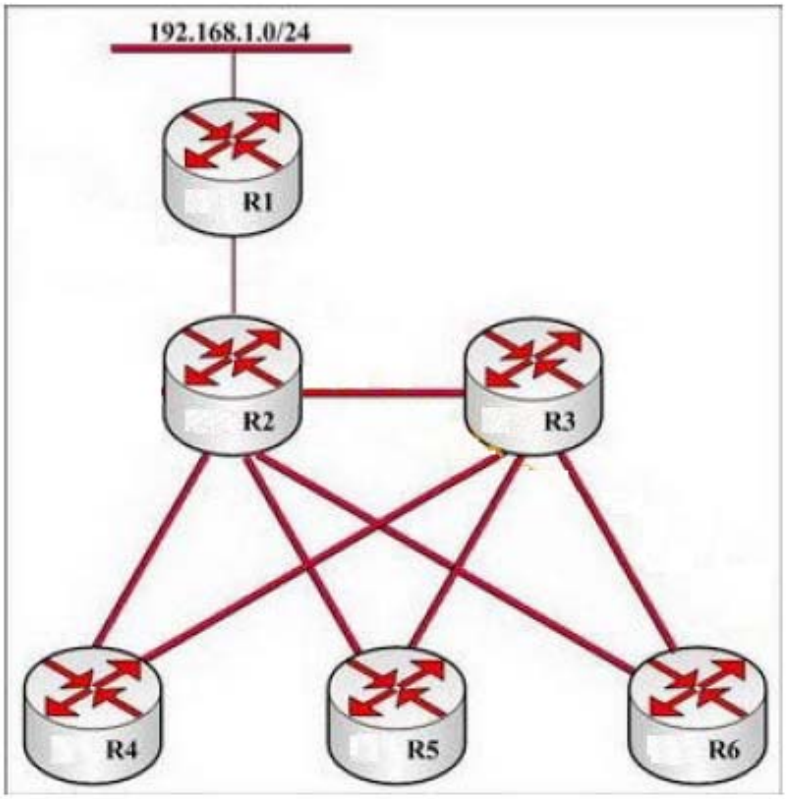
15. In the network presented in the following exhibit, all routers are configured to run EIGRP on all links. All packets transmitted during convergence are transmitted once (there are no dropped or retransmitted packets). What is the maximum number of queries P4S-R3 might receive for

192.168.1.0/24 if the link between P4S-R1 and P4S-R2 fails?



A. Four queries, one each from P4S-R2, P4S-R4, P4S-R5, and P4S-R6

B. No queries, because there aren't any alternate paths for 192.168.1.0/24

C. Seven queries, one from P4S-R2 and two each from P4S-R4, P4S-R5, and P4S-R6

D. One query, since the remote routers P4S-R4, P4S-R5, and P4S-R6 are natural stubs in EIGRP

Answer(s): A

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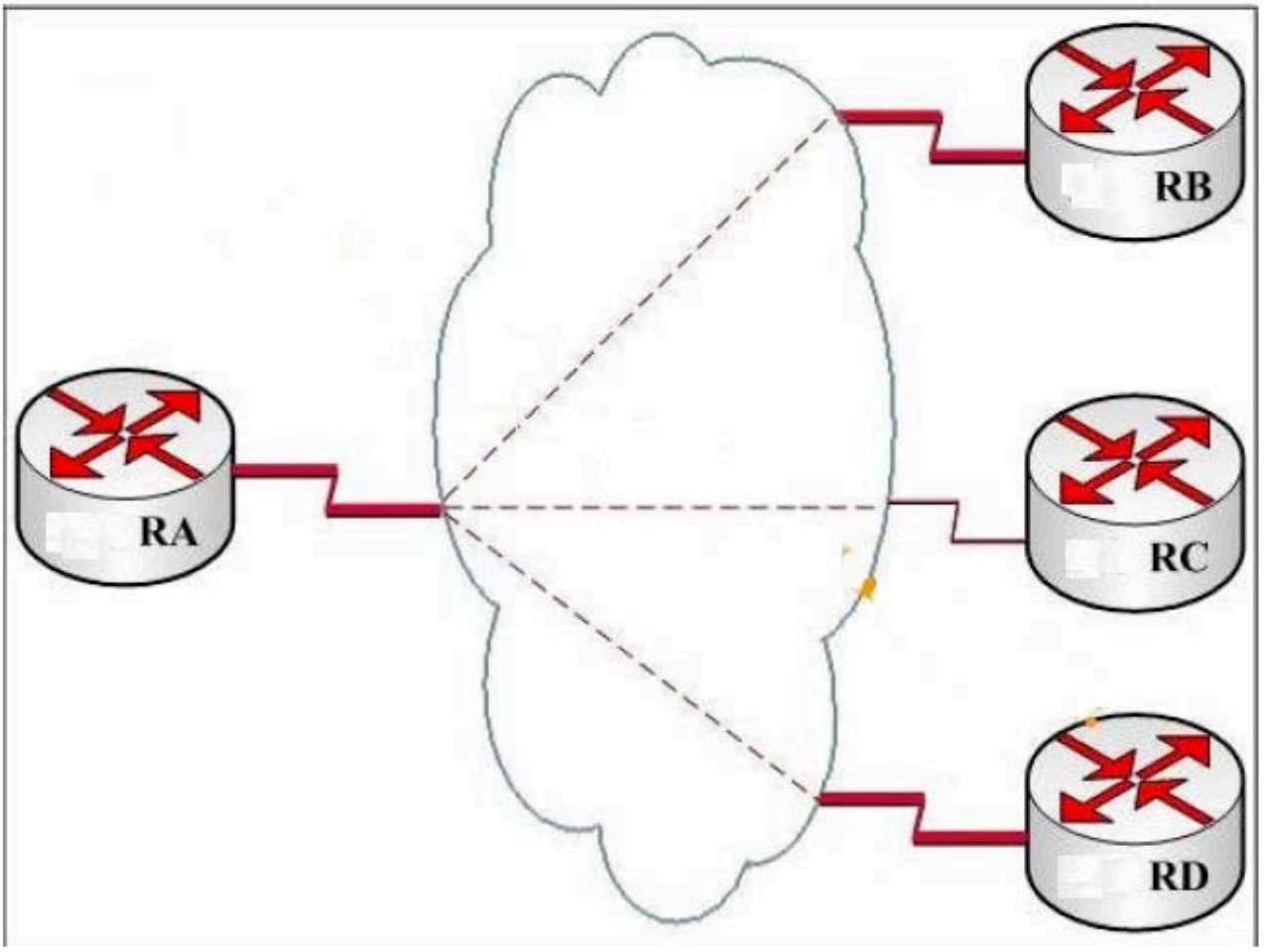
16. All routers in this network are running EIGRP according to the exhibit. Which step is the most important to make sure that this network core will converge quickly should a link failure occur?



A. Make certain the maximum number of paths on both of the routers is two

B. Make certain EIGRP is not running across non-transit links

C. Add another link between the two routers with no servers and set the metric on this new link equal to the other four links

D. Make certain EIGRP is running across all links

Answer(s): B

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17. When designing a converged network, which measures can be taken at the building access layer to help eliminate latency and ensure end-to-end quality of service can be maintained? (Choose three.)

- [ ] A. Rate limit voice traffic
- [ ] B. On figure spanning-tree for fast link convergence
- [ ] C. Isolate voice traffic on separate VLANs
- [ ] D. Classify and mark traffic close to the source

Answer(s): B C D

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18. Which two reasons are correct about building a flooding domain boundary in a link-state network? (Choose two.)

- [ ] A. To increase the size of the Shortest Path First tree
- [ ] B. To aggregate reach ability information
- [ ] C. To provide an administrative boundary between portions of the network
- [ ] D. To segregate complex and rapidly changing portions of the network from one another

Answer(s): B D

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19. The P4S company is planning to deploy a new multicast application in its network to do real-time trading. This application will be performed simultaneously by thousands of traders located Throughout the network, each a source of several IP multicast streams, to carry the "sell" and "buy" trading bids. All routers in its network have full hardware support for all PIM multicast modes. Which mode can be used to minimize the impact of the new application on the routers in the P4S network?

A. PIM Source Specific Multicast

B. PIM Any-Source Multicast

C. PIM Dense Mode

D. PIM Bidirectional

Answer(s): D

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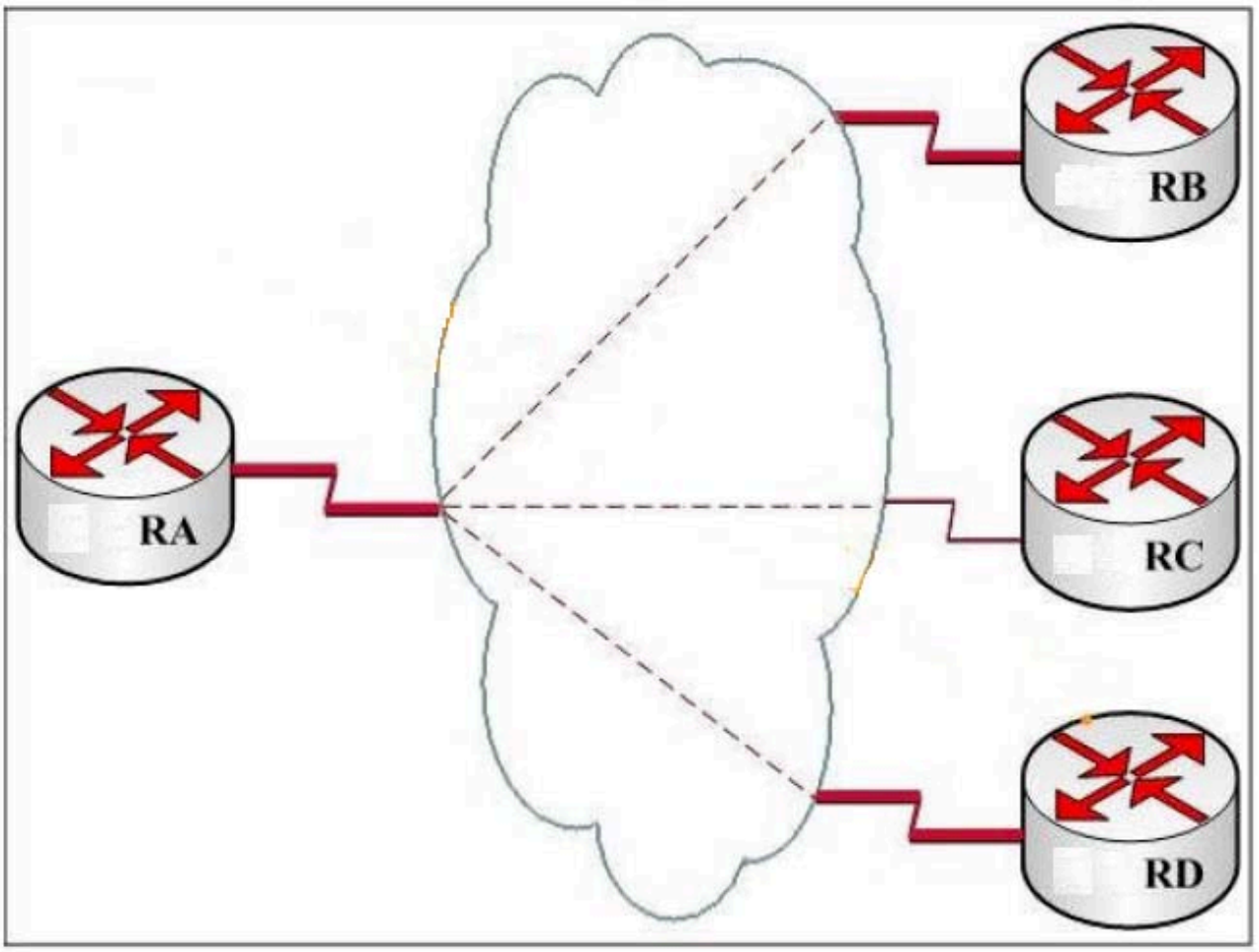
20. You work as a network technician for the P4S Ltd. Study the exhibit carefully, router P4S-RA is the hub router in a Frame Relay hub-and-spoke deployment. Configure router P4S-RA's serial interface as a point-to-multipoint interface, and it is servicing three spoke routers. The link between Router P4S-RC and the frame provider experiences a service disruption, which causes the interface on Router P4S-RC to go down. How does Router P4S-RA learn of this failure in the network and how does it react?



A. If OAM is configured between Router P4S-RA and Router P4S-RC, router P4S-RA will be notified of the failure after three missed OAM packets. After the third OAM packet is missed, the frame PVC becomes inactive, and this event terminates the routing process neighbor relationship established between Router P4S-RA and Router P4S-RC.

B. Router P4S-RA does not detect the failure in the network and its interface continues to remain in an operational state. If routing is configured over this link, Router P4S-RA must wait for the neighbor relationship to time-out before updating its routing table to account for the lost router and its networks.

C. Router P4S-RA must wait for a full LMI status update from the provider frame switch before it is notified about the PVC status. Once the full LMI status message is received, the routing process neighbor relationship between Router P4S-RA and Router P4S-RC is immediately terminated.

D. Router P4S-RA immediately detects the failure via LMI notification and its interface is placed in a non-operational state. If routing is configured over this link, the neighbor relationship is terminated and the routing table is updated. The change is then propagated as appropriate to the rest of the network.

Answer(s): B
