

# Practice Exam Questions for: Nokia IP Networks and Services Fundamentals (exam number: 4A0-100)

The following questions will test your knowledge and prepare you for the Nokia NRS I Certification Exam. Compare your responses with the Answer Key at the end of the document.

## Module 1: Introduction to Networking and Services

1. Which TCP/IP layer is responsible for path determination and end-to-end forwarding of datagrams?
  - a. The Application layer
  - b. The Transport layer
  - c. The Internet layer
  - d. The Link layer
2. What information is part of the encapsulation done at the Link layer?
  - a. Source and destination MAC addresses
  - b. Source and destination IP addresses
  - c. Source and destination port numbers
  - d. Source and destination email addresses
3. Which of the following is NOT a function of the control plane in a router?
  - a. To exchange control messages with other routers
  - b. To collaborate with other routers to find the best way to forward data packets
  - c. To populate the routing table and the tunnel table
  - d. To forward data packets towards their destination

## Module 2: Introduction to the 7750 Service Router

4. Which of the following shows a typical data packet flow when egressing a Nokia 7750 SR?
  - a. SF/CPM -> MDA -> IOM -> SFP
  - b. SF/CPM -> SFP -> IOM -> MDA
  - c. SF/CPM -> IOM -> MDA -> SFP
  - d. MDA -> IOM -> SF/CPM -> SFP

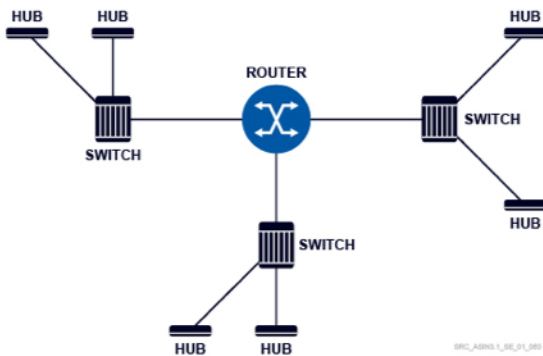
5. Which of the following about MD-CLI is FALSE?
  - a. MD-CLI allows atomic transactions.
  - b. Multiple users may edit the global candidate configuration concurrently.
  - c. Configuration changes are activated when a candidate configuration datastore is committed.
  - d. Uncommitted configuration changes are saved when a user exits the private configuration edit mode.
6. If one user is in the private configuration edit mode and another one is in the read-only configuration edit mode, which candidate configuration datastore do they have access to?
  - a. Both users have access to the global configuration datastore.
  - b. Both users have access to the same private configuration datastore.
  - c. The read-only user has access to the global configuration datastore and the private user has access to its own configuration datastore.
  - d. The read-only user has access to the running configuration datastore and the private user has access to the global configuration datastore.
7. Which of the following actions exits the MD-CLI implicit configuration mode?
  - a. Navigating to a CLI context outside the configuration branch
  - b. Navigating to the root CLI context
  - c. Issuing a full show command
  - d. Issuing the quit-config command
8. Which of the following displays the hierarchical structure of the available CLI commands at the current context level?
  - a. show
  - b. info
  - c. tree
  - d. help
9. Which of the following is NOT a valid log destination in a Nokia 7750 SR?
  - a. Main
  - b. CLI
  - c. Syslog
  - d. Console

## Module 3: Ethernet

10. Which of the following is NOT a characteristic of a hub?
  - a. It can interconnect hosts located in the same local area network.
  - b. It replicates Ethernet frames across all ports except the receiving port.
  - c. It inspects layer-2 frame headers.
  - d. Devices connected to it must operate in half-duplex mode.
11. Which address type is used to send frames to all devices in a Local Area Network?
  - a. Anycast
  - b. Multicast
  - c. Broadcast
  - d. Unicast

12. What happens when a switch receives an Ethernet frame with an unknown source MAC address and a destination MAC address of ff:ff:ff:ff:ff:ff?
- The destination MAC address is saved in the MAC FDB, and the frame is discarded.
  - The destination MAC address is saved in the MAC FDB, and the frame is flooded to all ports except the receiving port.
  - The source MAC address is saved in the MAC FDB, and the frame is discarded.
  - The source MAC address is saved in the MAC FDB, and the frame is flooded to all ports except the receiving port.

13. An Ethernet Local Area Network (LAN) consists of the components shown in the diagram. How many broadcast and collision domains are on this LAN?



- 2 broadcast domains, 7 collision domains
  - 2 broadcast domains, 9 collision domains
  - 3 broadcast domains, 7 collision domains
  - 3 broadcast domains, 9 collision domains
14. Which of the following statements about VLAN stacking is FALSE?
- It allows a service provider to support customers that use overlapping VLAN IDs.
  - It increases the number of customers sending VLAN-tagged traffic that a service provider can support.
  - It increases the size of the VLAN ID field in the Ethernet header.
  - It allows a service provider to add another VLAN tag to traffic.
15. Which of the following statements about LAG is FALSE?
- It aggregates multiple physical links into a single logical link.
  - It improves performance by increasing bandwidth between devices.
  - It provides protection against link or node failure.
  - It supports limited auto-negotiation on member ports.
16. Which of the following protocols is used to prevent loops in Ethernet networks?
- LAG
  - STP
  - ARP
  - ICMP

## Module 4: The Internet Layer

17. Which of the following is used to connect multiple broadcast domains?
- a. Hub
  - b. Switch
  - c. Router
  - d. Repeater
18. Which of the following is NOT a Regional Internet Registry?
- a. ARIN
  - b. IANA
  - c. RIPE NCC
  - d. AfriNIC
19. Which of the following is the broadcast address of the subnetwork to which host 172.16.176.135/24 belongs?
- a. 172.16.176.255
  - b. 172.16.191.255
  - c. 172.16.255.255
  - d. 172.255.255.255
20. Which of the following is a unicast address that is assigned to two or more devices on the same network?
- a. Network address
  - b. Broadcast address
  - c. Multicast address
  - d. Anycast address
21. Which of the following about hierarchical IPv4 addressing is FALSE?
- a. It creates a two-level address hierarchy.
  - b. It increases the number of IP addresses available in the Internet.
  - c. It supports route summarization to reduce routing table size.
  - d. It supports subnetting to divide a network into smaller subnetworks.
22. A network has an address of 206.47.132.0 and a network mask of 255.255.254.0. How many subnetworks can be created if each subnetwork must have at least 25 hosts?
- a. 4
  - b. 8
  - c. 16
  - d. 32
23. Which of the following is a characteristic of route summarization?
- a. It uses a default route to forward packets going to unknown destinations.
  - b. It maps multiple private IP addresses into one public IP address.
  - c. It divides a network into multiple subnets.
  - d. It reduces the number of route advertisements within a network.

24. Which of the following statements about the system IP address on a Nokia 7750 SR is FALSE?
- a. It belongs to a logical interface.
  - b. It has a fixed prefix length of /32.
  - c. It is manually configured by an operator.
  - d. It is associated with the management port.
25. Which of the following is NOT part of the IP forwarding process?
- a. Perform longest match lookup for the destination IP address
  - b. Perform MAC address learning
  - c. Push traffic through the switch fabric
  - d. Identify physical egress interface
26. What type of message is an ARP request?
- a. A unicast message
  - b. A broadcast message
  - c. A multicast message
  - d. An anycast message
27. Which of the following statements about ICMP is TRUE?
- a. ICMP is used to resolve a MAC address for a given IP address.
  - b. ICMP messages are generated by Ethernet switches.
  - c. ICMP messages are encapsulated within IP datagrams.
  - d. ICMP relies on the CSMA/CD algorithm.
28. Which DHCP message is used by a client to inform a DHCP server that it accepts the assigned IP address?
- a. Discover
  - b. Request
  - c. Offer
  - d. Acknowledgement

## Module 5: IP Routing Protocol Basics

29. Which of the following protocols is NOT used to build a routing table?
- a. LDP
  - b. OSPF
  - c. BGP
  - d. Static routing
30. Which of the following about a static route in a Nokia 7750 SR is FALSE?
- a. It is manually configured by an administrator.
  - b. It is preferred over dynamic protocols by default.
  - c. It changes dynamically if the topology changes.
  - d. It can be used for routing within the same autonomous system.

31. When configuring a static route on router R2, what next hop address should be used to reach a host on 192.168.1.0/27?



- a. 10.1.1.1
  - b. 10.1.1.2
  - c. 10.2.3.2
  - d. 10.2.3.3
32. Which of the following statements about the OSPF routing protocol is TRUE?
- a. It is a distance vector protocol.
  - b. It uses the SPF algorithm for route selection.
  - c. It uses hop count to determine the shortest path to a destination.
  - d. It is used for routing between different autonomous systems.
33. Which of the following about BGP is FALSE?
- a. It is a link state protocol.
  - b. It requires the establishment of a BGP session before routers can exchange routing information.
  - c. It can use import and export policies to change its default behavior.
  - d. It can be used for routing between autonomous systems.
34. Which of the following statements about autonomous systems is FALSE?
- a. AS numbers can be assigned by RIRs.
  - b. AS numbers can be assigned by ISPs.
  - c. Private AS numbers are advertised on the Internet.
  - d. eBGP is used between different autonomous systems.
35. Which of the following is the physical infrastructure that provides interconnections between ISPs?
- a. A demarcation point
  - b. An Internet exchange point
  - c. A central office
  - d. A point of presence

## Module 6: Services Overview

36. Which of the following statements about VPWS is FALSE?
- a. VPWS is a layer-2 service.
  - b. VPWS emulates a leased line between two locations.
  - c. Each VPWS maintains a MAC FDB.
  - d. CE devices are unaware of the service provider network.

37. Which of the following is TRUE about a CE router that is involved in a VPN service?
- a. It is aware of the service provider network.
  - b. It resides on the service provider premises.
  - c. It connects to at least one PE router.
  - d. It connects to at least one P router.
38. Which of the following statements about the service label is FALSE?
- a. The ingress PE device encapsulates customer data with a service label.
  - b. A service label identifies the service that data belongs to.
  - c. The egress PE device strips the service labels and forwards unlabeled packets.
  - d. A P device performs a service label swap operation.
39. What operation is performed by an iLER when it receives a packet?
- a. It pushes a new MPLS label and forwards the packet to the next LSR.
  - b. It swaps the MPLS label and forwards the packet to the next LSR.
  - c. It forwards the packet to the next LSR without altering the MPLS label.
  - d. It pops the MPLS label and forwards the packet to the next IP router.
40. What is the function of an SAP?
- a. It provides a P device with service access.
  - b. It provides a CE device with service access.
  - c. It binds the service to an MPLS service tunnel.
  - d. It binds the service to an MPLS transport tunnel.



## Answer Key

### Module 1

- 1. C
- 2. A
- 3. D

### Module 2

- 4. C
- 5. D
- 6. C
- 7. B
- 8. C
- 9. A

### Module 3

- 10. C
- 11. C
- 12. D
- 13. D
- 14. C
- 15. C
- 16. B

### Module 4

- 17. C
- 18. B
- 19. A
- 20. D
- 21. B
- 22. C
- 23. D
- 24. D
- 25. B
- 26. B
- 27. C
- 28. B

### Module 5

- 29. A
- 30. C
- 31. D
- 32. B
- 33. A
- 34. C
- 35. B

### Module 6

- 36. C
- 37. C
- 38. D
- 39. A
- 40. B

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Nokia OYJ  
Karakaari 7  
02610 Espoo  
Finland  
Tel. +358 (0) 10 44 88 000

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