

Practice exam questions for Nokia Fixed Networks Fundamentals exam (4A0-F10)

The following questions will test your knowledge and help prepare you for the Nokia Fixed Networks Fundamentals written exam. Compare your responses with the Answer Key at the end of the document.

1. Which of the following statements about the end-to-end broadband network structure is FALSE?
 - a. The end user side is composed of OLT, DSLAM or RAN.
 - b. The fixed access network can be wired or wireless.
 - c. GPON is one of the broadband access network technologies.
 - d. The access network connecting to the core network is composed of switches and routers.
2. Which is of the following is NOT a part of a single optical fiber?
 - a. Core
 - b. Splitter
 - c. Buffer coating
 - d. Cladding
3. Which of the following statements about Corteca is FALSE?
 - a. Corteca configures and monitors Nokia and third-party WiFi devices.
 - b. The Corteca home controller is used to manage and optimize WiFi networks.
 - c. The end-user can perform a self-install of the WiFi network through the Corteca mobile app.
 - d. The service provider uses the Corteca console to enable Zero-Touch Provisioning (ZTP).
4. Which of the following statements about the list node (a node type in the YANG tree structure) is TRUE?
 - a. It is like a container but can be instantiated and each instance is identified by one or more keys.
 - b. It can have sub-nodes and each sub-node can be of any type.
 - c. It contains a list of values with no children nodes.
 - d. It contains a value with no children nodes.

5. Which of the following is NOT an essential characteristic of SDN?
 - a. Logically centralized data plane
 - b. Separation of control plane and data plane
 - c. Network virtualization and slicing
 - d. Programmability with network APIs
6. Which of the following is NOT one of the four layers in NETCONF?
 - a. Application layer
 - b. Content layer
 - c. Messages layer
 - d. Operations layer
7. Which of the following is NOT an application in the Altiplano Access Controller (AC)?
 - a. NC browser
 - b. Policy manager
 - c. PM utilities
 - d. Device manager
8. Which of the following statements about the Virtual Network Functions Manager (VNFM) is TRUE?
 - a. It is responsible for the lifecycle management of VNF instances.
 - b. It is responsible for onboarding new network services.
 - c. It is responsible for the life cycle management of each VM instance.
 - d. It defines reference points used to exchange information between other functional blocks.
9. Which of the following statements about IPFIX is FALSE?
 - a. It permanently stores data on the physical devices.
 - b. It gathers and stores information in a standard format.
 - c. It provides a standard means of transmitting traffic flow information over the network.
 - d. It allows randomized streaming that can be used to average out network bandwidth.
10. Which of the following statements about fiber attenuation is TRUE?
 - a. Single Mode Fiber (SMF) has a higher attenuation than Multi-Mode Fiber (MMF).
 - b. An amplifier can be used to boost the light signal affected by the fiber attenuations.
 - c. Crosstalk is one of the major attenuations inside the fiber.
 - d. Vectoring is used to measure noise due to fiber attenuations.
11. Which of the following statements about ONT in a Fiber-to-the-Home (FTTH) architecture is TRUE?
 - a. It is a passive optical infrastructure that connects the OLT to the ODN.
 - b. It manages the communication with ONUs at the customer premises.
 - c. It enables operators to centrally manage devices at the customer premises through TR-069.
 - d. It receives optical signals from the OLT and converts them into electrical signals for use by end-users.
12. Which of the following statements about the copper access technology is FALSE?
 - a. ADSL uses vectoring to keep the signal over long distances.
 - b. G.FAST uses time division duplexing.
 - c. DSL uses a technique that divide a spectrum into smaller chunks of bandwidth per channel.
 - d. DSL allows for simultaneous voice and data communication.

13. Which of the following is an advantage of using bonding in DSL?
 - a. It performs noise measurements and generates anti-phase signal in real-time.
 - b. It increases bitrate proportionally with the number of copper pairs being used.
 - c. It regenerates signals that become weak due to absorption.
 - d. It enables every access node port to serve multiple subscribers.
14. Which of the following statements about the FWA indoor gateway is FALSE?
 - a. It uses the vectoring technique to cancel crosstalk.
 - b. It uses 4G/5G to connect the home to the wireless network.
 - c. It uses WiFi to connect the user devices within the home network.
 - d. It can be controlled and managed by an external ACS.
15. Which of the following statements describes the Optical Network Termination (ONT) in the access network architecture?
 - a. It facilitates service provisioning and status monitoring.
 - b. It is a device that connects between OLT and a single subscriber.
 - c. It acts as a bridge between the Ethernet aggregation network and the access network.
 - d. It enforces SLAs by allocating bandwidth and QoS.
16. Which of the following statements about the Network Termination (NT) card in a Nokia Lightspeed device is TRUE?
 - a. It has connectors and optics cages on the faceplate that can be used to communicate with external devices.
 - b. QoS is not supported on uplink interfaces.
 - c. It can be managed locally using an OOB serial port or a LEMI port.
 - d. It contains a slot for a field replaceable clock and alarm module.
17. Which of the following statements about the multicast traffic is FALSE?
 - a. Multicast addresses are reserved for group membership applications.
 - b. Packets are addressed to a specific host.
 - c. Receivers may be on a local or remote broadcast domain.
 - d. Routers replicate packets in the core network.
18. Which of the following is NOT performed by OLT in the 802.1x home subscriber authentication?
 - a. Blocks all non-802.1x frames until the RG is authenticated
 - b. Extracts 802.1 information sent by the RG
 - c. Terminates 802.1x EAPOL frames sent by the authentication server
 - d. Acts as an intermediate party between the supplicant and the authentication server
19. When VLAN per service model is used for the traffic flows between the home and aggregation network, which of the following statements is FALSE?
 - a. Traffic from each subscriber is sent to the aggregation network on a separate VLAN.
 - b. Within the access network, there is a VLAN associated with each subscriber.
 - c. The OLT prevents one subscriber from broadcasting messages to other subscribers.
 - d. The OLT must switch unicast traffic received on the aggregation network to the correct subscriber in the access network.

20. Which of the following messages is sent by a host when it wants to join a multicast group?
 - a. IGMP query message
 - b. IGMP report message
 - c. Group-specific query message
 - d. General query message
21. Which of the following statements about QoS policing is TRUE?
 - a. It is used to determine the forwarding class of the packets.
 - b. It is used to smooth out the traffic bursts.
 - c. It buffers packets on arrival, increasing latency.
 - d. It drops packets when average ingress rate exceeds PIR.
22. Which of the following home devices is connected to the FTTH fixed access network?
 - a. DSL CPE
 - b. ONT
 - c. FWA gateway
 - d. FWA receiver
23. Which of the following statements about the Layer 3 residential gateway ONT solution in the home network is FALSE?
 - a. The residential gateway has Layer 3 functionality.
 - b. The residential gateway provides users with local IP addresses.
 - c. The residential gateway provides users with firewall functionality.
 - d. The residential gateway acts as DHCP client for home LAN.
24. Which technology is used by a FWA indoor gateway to connect to the user devices within the home network?
 - a. 4G/5G wireless
 - b. In-home WiFi
 - c. TR-069
 - d. Fiber
25. Which of the following statements about the use of TR-069 protocol is TRUE?
 - a. It is used by ACS to manage a variety of functionalities on ONTs/CPEs
 - b. It is used for communication between the OLT and ONT
 - c. It is used for communication between the DSLAM and CPE
 - d. It is used to provision ONTs/CPEs even when they are offline.
26. Which of the following is NOT considered a basic building block of a WiFi system?
 - a. Transmitter
 - b. Receiver
 - c. Fiber cable
 - d. Antenna
27. Which of the following is NOT a benefit of using WiFi ?
 - a. Low latency
 - b. Low installation cost
 - c. Extremely high throughput
 - d. Backward compatibility

28. Which of the following statements about a WiFi router is TRUE?
- a. It is a device that allows wireless devices to connect to a wired network through WiFi.
 - b. It is a system that uses multiple access points to provide extended WiFi coverage over a large area.
 - c. It is a multifunction device that combines the functionality of a router, a switch, and an access point.
 - d. It is a fully self-contained gateway that connects the home to the wireless network.
29. Which of the following statements about WiFi CPE management is FALSE?
- a. Corteca is responsible for managing WiFi services in the home.
 - b. Message Transport Protocol (MTP) facilitates the transfer of information to the CPE's agent.
 - c. Devices are controlled in accordance with the TR-069 standard.
 - d. Instance Database Model (IDM) is used to program WiFi services on the CPE.
30. Which of the following statements about software disaggregation in the access network is FALSE?
- a. It moves data and transport functions to an SDAN controller in the cloud.
 - b. Software is broken up into distinct modules.
 - c. A module is responsible for a specific function area.
 - d. Hardware abstraction allows control and management of different physical hardware resources.
31. Which of the following is NOT a protocol used by the device manager in the Altiplano Network Virtualizer?
- a. NETCONF
 - b. RESTCONF
 - c. YANG
 - d. IPFIX
32. Which of the following statements about Altiplano's automation capabilities is FALSE?
- a. The E2E service orchestrator uses Open APIs for service abstraction.
 - b. The Altiplano monitoring framework analyses the health of the access nodes.
 - c. The device's operational state and log information are stored in the common data lake.
 - d. Altiplano uses industry-standard NETCONF/YANG to define rule-based automation.
33. Which of the following statements about the Lightspan access node datapath is FALSE?
- a. User Network Interfaces (UNI) are directly connected to subscribers.
 - b. Network to Network Interfaces (NNI) connects one Lightspan node to another.
 - c. The downstream access node is connected to the ethernet aggregation network.
 - d. The subtending interface connects two access nodes.
34. Which of the following statements about intent types in intent-based networking is TRUE?
- a. The intent type consists of files to be imported into Altiplano that provide templates.
 - b. The intent type provides a mapping of abstract network goals to low-level device configuration.
 - c. The intent type and profiles determine the device configuration sent to specific access nodes.
 - d. The intent type provides an initial configuration of the physical network element when device intent is first created.
35. When mapping intents to layers, what layer is device-config-mf intent mapped to?
- a. Equipment config
 - b. Physical equipment layer
 - c. Service infrastructure
 - d. User services

36. Which of the following statements about OLT configuration is FALSE?
- a. The device-config intent is used to assign profiles used by an OLT.
 - b. The uplink-connection intent is used to configure uplink interfaces and clock ports used by the OLT.
 - c. There can be more than one uplink-connection intent per device intent.
 - d. A device intent is used to configure a specific type of OLT.
37. Which of the following statements about HSI service architecture is FALSE?
- a. Each ONT is connected to an HSI Forwarder on the LT Card.
 - b. Subscribers are connected to an ONT NNI port.
 - c. Each HSI forwarder is connected to an HSI VPLS on the IHUB.
 - d. The HSI forwarder connects to the aggregation network on one or more NNI ports.
38. Which of the following statements about IPTV architecture is TRUE?
- a. The IPTV VPLS connects to the aggregation network through one or more UNI ports.
 - b. The IPTV receiver in the home network is directly connected to an OLT port.
 - c. The aggregation network switches traffic between the VOD server and the OLT.
 - d. Each ONT is directly connected to an IPTV VPLS on the OLT's IHUB.
39. Which of the following statements about voice service architecture is FALSE?
- a. The SIP agent on an ONT is connected to a voice forwarder on an LT card.
 - b. The phone connects to the subtending interface on the ONT.
 - c. Each ONT is connected to a LT card that switches voice/data between the SIP agent and the IHUB.
 - d. Voice VPLS on IHUB switches traffic between LT cards and PTSN SIP registrar and proxy.
40. When configuring multiple services on a specific subscriber ONT, which of the following statements about the TCONT profile is TRUE?
- a. It specifies the mapping of traffic class to queue.
 - b. It defines the subscriber service.
 - c. It specifies hardware layout and supported services.
 - d. It configures the multicast VPN.



Answer Key

1. A	11. D	21. D	31. B
2. B	12. A	22. B	32. D
3. D	13. 1B	23. D	33. C
4. A	14. A	24. B	34. B
5. A	15. B	25. A	35. A
6. A	16. A	26. C	36. C
7. D	17. B	27. B	37. B
8. A	18. C	28. C	38. C
9. A	19. A	29. C	39. B
10. B	20. B	30. A	40. A

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