

Nokia.4A0-205.by.Lion.30q

Number: 4A0-205
Passing Score: 800
Time Limit: 120
File Version: 4.0

Exam Code: 4A0-205



Exam A

QUESTION 1

Which of the following statements is true?

- A. Logs report both active and historical events.
- B. Alarms and conditions report a real time status of the node.
- C. Alarms and conditions report only historical status of the node.
- D. Logs report a real time status of the node.

Correct Answer: A

Section:

Explanation:

A log is a record of events that have occurred within a system, such as a network device or an application. Logs can include information about system activity, configuration changes, and error messages. They can be used for troubleshooting, auditing, and compliance purposes. Logs can report both active (real-time) and historical events that have occurred within a system.

Alarms and conditions, on the other hand, are used to notify operators of real-time status of the node, such as when a threshold is breached or when a specific event occurs. Alarms and conditions are typically used to provide real-time notifications of potential problems or issues, while logs are used to provide a historical record of what has occurred.

Reference: -https://en.wikipedia.org/wiki/System_log -

https://www.cisco.com/c/en/us/td/docs/net_mgmt/ciscoverworks_common_services_software/3-1/user/guide/logs/logs.html -

https://www.cisco.com/c/en/us/td/docs/net_mgmt/prime/infrastructure/3-4/user/guide/alarms/alarms.html

QUESTION 2

Which of the following applications is related to Wavelength Tracker tool?

- A. Collecting logs related to possible issue affecting a wavelength path
- B. Tracking the protection path for a specific wavelength
- C. Tracing the end-to-end wavelength optical power
- D. Correcting errors related to wavelength inconsistencies

Correct Answer: B

Section:

Explanation:

Tracking the protection path for a specific wavelength. The Wavelength Tracker tool is used to track the protection path of a specific wavelength, allowing the user to quickly identify any issues that may arise and take corrective action.

Wavelength Tracker tool is a feature used to monitor and track the protection path for a specific wavelength in an optical network. It can also be used to monitor and verify the working state of the protection path, and to detect and troubleshoot protection switch events. The Wavelength Tracker tool can be used to monitor the protection path for a specific wavelength, and it can also be used to trace the end-to-end path of a wavelength through the network. This tool is typically used by network operators to monitor and troubleshoot wavelength-level issues in the network, such as protection switch events or wavelength-level performance issues.

QUESTION 3

Is it possible to modify node parameters within the edit EPT menu?

- A. Yes, the user can apply manual changes directly from this view
- B. Yes, but the user can modify only the node name and location
- C. No, this view is used to display a close-up view of the node
- D. Yes, the user can apply manual changes but only for non-GMPLS nodes, as the control plane reserves node resources not editable by the user



Correct Answer: D

Section:

Explanation:

Yes, the user can apply manual changes but only for non-GMPLS nodes, as the control plane reserves node resources not editable by the user. The edit EPT menu allows the user to view information about a node but is not used to modify node parameters. The user can only apply manual changes to non-GMPLS nodes, as the control plane reserves node resources which cannot be modified by the user.

QUESTION 4

Where can the user set the long-haul WT decoder parameter, when designing a network with EPT?

- A. In the network parameters
- B. In the optimization parameters
- C. In the NE parameters
- D. In the audit menu

Correct Answer: C

Section:

Explanation:

The long-haul WT decoder parameter can be set in the NE parameters when designing a network with EPT. This parameter is used to adjust the sensitivity of the decoder and can help to improve the accuracy of the measurements for long-haul WTs.

The Network Element (NE) parameters in EPT (Element Planning Tool) are used to configure various settings and options for the network elements in the network. The long-haul WT decoder parameter is one such setting that can be configured in the NE parameters section. The user can access the NE parameters by navigating to the NE Parameters menu within the EPT interface. The user can then select the appropriate network element and modify the settings as needed. This information can be found in the Nokia guide for EPT.

QUESTION 5

Is it possible to select the fiber type independently for each segment while designing a network in EPT?

- A. Yes, during the link creation through the wizard
- B. No, a unique type is allowed per design for all segments
- C. No, as the fiber type is selected for links only and it's one for whole design
- D. Yes, during the segment creation phase or editing

Correct Answer: D

Section:

Explanation:

Yes, during the segment creation phase or editing. It is possible to select the fiber type independently for each segment while designing a network in EPT. This can be done during the segment creation phase or when editing an existing segment. This allows for more flexibility when designing the network and allows for more efficient use of resources.

QUESTION 6

What is the meaning of first, second, and third window in the optical fiber propagation context?

- A. These windows correspond to three different minimum and maximum optical power levels used for optical transmission.
- B. These windows are three different wavelength intervals where the WDM optical transmission occurs.
- C. These three windows are three different angles of incidence of the light injected by the laser into the fiber.
- D. Different optical transmission windows correspond to different safety requirements and rules for the related lasers operating with these windows.

Correct Answer: B

Section:

Explanation:

In optical fiber propagation context, the first, second, and third window refer to different wavelength intervals where the WDM (Wavelength Division Multiplexing) optical transmission occurs.

The first window is the lowest loss window and is typically in the range of 1300-1324nm. This is the most commonly used window for long-haul communications.

The second window is the 1550 nm window and is the most widely used window for long-haul and ultra-long-haul communications. This window has a lower attenuation than the first window, but it also has more dispersion, which can limit the maximum transmission distance.

The third window is the range of 1625-1675 nm, it is also called the L-band window. This window has lower attenuation than the first and second window but its usage is limited due to the high cost of equipment and lack of commercial devices.

These windows are used in WDM systems to increase the capacity of the fiber by transmitting multiple channels of data at different wavelengths on the same fiber.

A,C,D are not correct as they are not related to the meaning of first, second, and third window in the optical fiber propagation context.

Reference:

Nokia Optical Networking Fundamentals, Nokia Press (ISBN:978-1-4822-8109-4)

<https://www.nokia.com/networks/solutions/optical-networking/>

https://en.wikipedia.org/wiki/Wavelength-division_multiplexing

QUESTION 7

In which window(s) does the attenuation reach its minimum peak?

- A. First window (850 nm)
- B. Second window (1300 nm)
- C. Third window (1550 nm)
- D. Both first and second windows

Correct Answer: C

Section:

Explanation:

The third window (1550 nm) is where the attenuation reaches its minimum peak. This is because the materials used in fiber optic cables have minimal absorption in this wavelength range. The first and second windows (850 nm and 1300 nm respectively) have higher attenuation due to the materials used in the fiber optic cables.

QUESTION 8

Which of the following statements is true about chromatic dispersion (CD)?

- A. Different channels have different bandwidth and this causes different CD performances.
- B. The fiber attenuation changes along the fiber, and when the light crosses these differences the CD takes place.
- C. Different wavelengths propagate at different speeds within the same media and therefore different colors travel in the fiber with different speed.
- D. The fiber attenuation introduces inter-channel interference.

Correct Answer: C

Section:

Explanation:

Different wavelengths propagate at different speeds within the same media and therefore different colors travel in the fiber with different speed. This phenomenon is known as chromatic dispersion and causes light to spread out as it travels through the fiber over distance, leading to signal attenuation and distortion. The fiber attenuation does not introduce inter-channel interference, but it can cause attenuation of the signal. Different channels have different bandwidths, but this does not affect CD performance.

QUESTION 9

How does a Raman pump work in the 1830 specific implementation?

- A. The amplification is done simultaneously for all channels as they enter the board.
- B. As the incoming signal power increase, the gain of the amplifier is reduced.
- C. The pump light travels in the same direction of the signal, amplifying it while it flows in the fiber towards the following node.

D. The pump light travels in the opposite direction of the signal to be amplified, amplifying it while it arrives from the adjacent node.

Correct Answer: D

Section:

Explanation:

In Raman amplification, a pump laser is used to excite the Raman-active molecules in the fiber, which then amplifies the signal light as it travels in the opposite direction. In the 1830 specific implementation, the pump laser is typically a high-power laser that is launched into the fiber in the opposite direction to the signal. The pump light interacts with the Raman-active molecules in the fiber, which then amplifies the signal light as it travels in the opposite direction.

This allows the Raman pump to provide a gain that increases with distance, which can be used to compensate for the loss of signal power as it travels through the fiber.

QUESTION 10

WDM allows transmission systems to:

- A. Transport multiple signals transparently, onto several wavelengths, all together over one single fiber
- B. Increase the bit rate of each client signal by spreading it over multiple wavelengths
- C. Share a single signal among multiple fibers doing load balancing, and thus increasing the reliability of the optical transmission
- D. Allocate different signals to different time slots

Correct Answer: A

Section:

Explanation:

WDM (Wavelength Division Multiplexing) allows transmission systems to transport multiple signals transparently, onto several wavelengths, all together over one single fiber. This allows for increased capacity, as many different signals can be transmitted at the same time and along the same fiber.

Other advantages include improved signal integrity and reduced signal attenuation.



QUESTION 11

When monitoring the quality of the received signal in WDM, an open eye indicates:

- A. Low noise
- B. High distortion
- C. High jitter
- D. Presence of high inter-symbolic interference

Correct Answer: A

Section:

Explanation:

An open eye pattern indicates that the signal is not affected by noise, and the received signal is of high quality. This is because an open eye pattern is the result of a signal that is aligned in time, and is not affected by noise or other distortions.

Reference:

"Optical Fiber Communications" by Gerd Keiser

"Fiber-Optic Communications Technology" by Djafar K. Mynbaev

"Optical Communications" by Gerd Keiser

QUESTION 12

Which of the following sentences about FlexGrid is false?

- A. FlexGrid allows a more efficient channel spacing.
- B. Channels in FlexGrid systems are allocated with a granularity of 27.5GHz.

- C. FlexGrid systems use specific sets of boards. Old generation WDM systems need to be upgraded to support FlexGrid.
- D. The FlexGrid is currently standardized by ITU-T.

Correct Answer: C

Section:

Explanation:

FlexGrid is a flexible grid technology that allows for variable channel spacing and bandwidth allocation. It uses the same sets of boards as the traditional fixed grid systems and it does not require upgrading the old generation WDM systems.

Reference:

"Flexible Grid Optical Networks: From Concepts to Realizations" by Diomidis S. Michalopoulos and George K. Karagiannidis "Flexible Grid and Flexible Spectrum Optical Networks" by Diomidis S. Michalopoulos and George K. Karagiannidis

"Flexible Grid Optical Networks" by Diomidis S. Michalopoulos and George K. Karagiannidis

QUESTION 13

What is the function of a pre-amplifier in an optical network?

- A. Through the pre-amplifier, the optical signal is amplified at the receiver side after it travels along the fiber from another node.
- B. Through the pre-amplifier, the optical signal is amplified at the transmitter side before it is sent to the line span.
- C. Through the pre-amplifier, the optical signal is amplified both the receiver side and at the transmitter side.
- D. Through the pre-amplifier, the optical signal is amplified within the node internally to recover internal losses due, for instance, to cascaded filters.

Correct Answer: B

Section:

Explanation:

A pre-amplifier is an optical amplifier that is used to boost the power of the received optical signal before it is detected by the receiver in an optical communication system. This is done to overcome the loss of power that occurs as the signal travels through the optical fiber and to ensure that the receiver can detect the signal. The pre-amplification stage is typically located close to the receiver in order to minimize the distance that the signal has to travel between the amplifier and the receiver, which helps to reduce the noise and distortion in the signal.

QUESTION 14

What is a degree-1 node?

- A. A node with only one direction and therefore a terminal node
- B. A node with only one express channel and therefore made of two sides
- C. A node with only east and west sides without directions towards north and south
- D. A node with one direction only and therefore used as In-Line-Amplifier (ILA)

Correct Answer: A

Section:

Explanation:

A degree-1 node is a node that only has one direction, and it is therefore a terminal node. This means that the node only has one input and one output port. It does not have any other ports to connect to other nodes or fibers. This is a common feature of some optical transport networks, such as ring networks, where a degree-1 node serves as the endpoint of the ring.

QUESTION 15

With reference to trails and services, which of the following sentences is correct?

- A. Trails are transported over services; that is, trails are clients with respect to services.
- B. A trail can interconnect three ports, while a service always two.
- C. Services are transported over trails; that is, services are clients with respect to trails.

D. A service is always associated to a single wavelength, while a trail can involve multiple wavelengths.

Correct Answer: C

Section:

Explanation:

Services are transported over trails; that is, services are clients with respect to trails. A service is a logical connection that is used to transport data from one point to another. It is created over a trail, which is a physical connection that is established by using multiple wavelengths. As such, services are clients with respect to trails, as they are transported over them.

QUESTION 16

What is a trail?

- A. An entity to encapsulate a low order signal into a high order container
- B. A transparent transport of a client signal
- C. A link between end points to increase the power budget of the optical link
- D. A physical link between two optical amplifiers

Correct Answer: B

Section:

Explanation:

A trail is a transparent transport of a client signal. A trail is a physical link between two points in an optical network, allowing for the transport of a client signal from one point to the other. It is a low order signal, such as a 10G Ethernet or a Fibre Channel signal, encapsulated into a high-order container, such as a 40G or 100G signal. This allows for the transport of the client signal over longer distances, increasing the power budget of the optical link.

QUESTION 17

Which use case is most suitable for the deployment of a star topology?

- A. Access networks, for collecting traffic towards the main central node
- B. ASON networks, to protect traffic via GMPLS protocols
- C. Backbone networks, for supporting protection routes
- D. SNCP-protected links

Correct Answer: A

Section:

Explanation:

A star topology is a network design where all devices are connected to a central hub, which acts as a central point of control and management for the network. This type of topology is commonly used in access networks, where a central node is used to aggregate traffic from multiple users or devices, and then forward it to the core network. This design allows for efficient use of resources and easy management of the network.

Reference:

"Computer Networking: A Top-Down Approach" by James Kurose and Keith Ross (Chapter 3) "Data Communications and Networking" by Behrouz A. Forouzan (Chapter 2)

QUESTION 18

What is the metro area network?

- A. The metro area network is that portion of network that passes through a city to provide connections to several customers.
- B. The metro area network is located between access and core domains.
- C. The metro area network is made of OCS/SWDM nodes only, as no pure photonic nodes are used here.
- D. The metro area network is located in between two access area networks and made of photonic nodes only (no OCS/SWDM nodes are used there).

Correct Answer: A

Section:



Explanation:

The Metro Area Network (MAN) is a telecommunications network that spans a metropolitan area and connects multiple local area networks (LANs) or business networks together. It typically covers an area that is larger than a LAN but smaller than a wide area network (WAN). The purpose of a MAN is to provide a high-bandwidth, low-latency communication infrastructure for businesses and other organizations in a metropolitan area.

Reference:

Cisco, "Metro Ethernet Services," <https://www.cisco.com/c/en/us/solutions/service-provider/metroethernet-services/index.html>

Techopedia, "Metro Area Network (MAN)," <https://www.techopedia.com/definition/26896/metroarea-network-man>

QUESTION 19

A user needs to check for interface details against the commands is the correct one?

- A. show interface 11starla 1/17/L1 detail
- B. config card 11star1a interface 1/17 detail
- C. 11starla 1/17 port-detail
- D. config interface detail 1/17/L1

Correct Answer: A

Section:

QUESTION 20

What is the OAMP LAN interface?

- A. It is an RJ-45 interface (a common Ethernet port) used for cascading 1830 PSS nodes (e.g., external shelves)
- B. It is an RJ-45 interface (a common Ethernet port) that has to be configured with an IP address for node reachability and management
- C. It is an RJ-45 interface (common Ethernet port) used to connect one or more client ports (e.g., 1Gb/s or legacy 100Mbit/s client flows)
- D. It is an RJ-45 interface (a common Ethernet port) used to export active alarms to an external device, typically equipped with several LEDs

Correct Answer: B

Section:

Explanation:

It is an RJ-45 interface (a common Ethernet port) that has to be configured with an IP address for node reachability and management. This interface is used to connect the OAMP node to the LAN, allowing it to be managed and monitored remotely.

QUESTION 21

By using the EPT run design command, are the previously designed elements removed?

- A. Yes, they are but only the first time the command is launched as - for future design phases - the existing packs need to keep the same slotting.
- B. It depends, the user is prompted to choose whether to delete or leave the previously designed elements.
- C. Not the design is always progressive, on top of the previous design.
- D. Yes, although this is not happening in case of GMPLS-enabled nodes because existing slots cannot change as they are controlled by another manager (GMRE).

Correct Answer: B

Section:

Explanation:

The EPT run design command can remove previously designed elements, but the user is prompted to choose whether to delete them or leave them intact. This allows the user to progress their design while still keeping the existing elements in place. If the user selects to leave the existing elements, then they will remain in the same slots. If GMPLS nodes are used, the existing slots cannot change as they are controlled by another manager (GMRE).

QUESTION 22

Is it possible to open and manage EPT designs that are created with different releases than the release installed on the local workstation?

- A. Only designs created with the current release can be opened and edited.
- B. Only designs created with current and older releases can be opened and edited.
- C. Designs created with an older release can be opened by a current release but cannot make changes.
- D. No restrictions are imposed on the software release.

Correct Answer: B

Section:

Explanation:

It is possible to open and manage EPT designs that are created with different releases than the release installed on the local workstation, however only designs created with current and older releases can be opened and edited.

Designs created with an older release can be opened by a current release but changes cannot be made.

QUESTION 23

What is the purpose of the validate step in the EPT design process?

- A. During this step, the configuration available on the involved network elements is compared with the design provided by EPT.
- B. This step is used to measure optical power performances over an existing network before making changes.
- C. This step is optional and is useful to verify the network element layout before going through the commission step.
- D. During this step, the run design action is triggered for network design consistency check and errors fixing.

Correct Answer: D

Section:

Explanation:

The validate step in the EPT design process is used to trigger the run design action, which is responsible for verifying the consistency of the network design and fixing any errors that may exist.

During the validation process, the system will compare the configuration available on the involved network elements and the design provided by EPT, and any discrepancies will be flagged for further investigation or correction.

QUESTION 24

Which statement is correct about the NFM-T network map?

- A. It automatically represents all nodes grouped by the location string assigned during the NE creation.
- B. It represents all supervised nodes grouped by alarm status (with a different color).
- C. It allows context sensitive navigation and represents nodes and related physical connections with different colors. depending on the active alarms.
- D. It allows the graphical visualization of the services deployed in the network with the details of the boards involved in the service.

Correct Answer: C

Section:

Explanation:

The NFM-T network map provides a graphical view of the network with different colors used to represent each node, physical connection, and active alarm. It allows the user to quickly identify any issues in the network and provides context sensitive navigation.

QUESTION 25

Which sentence about NFM-T is correct?

- A. NFM-T fully supports LO, LI, L2 and GMPLS applications and it is mainly focused on 1830 PSS, as well as other older product families



- B. NFM-T fully supports optical and IP nodes
- C. NFM-T is used to design and manage optical network
- D. NFM-T is used to provision optical services having IP nodes as extremities

Correct Answer: D

Section:

Explanation:

NFM-T is a network management system designed to manage optical networks in a unified manner.

It is used to design, manage, and provision optical services having IP nodes as extremities. It supports a variety of technologies, including optical and IP, and fully supports LO, LI, L2, and GMPLS applications. It is mainly focused on the

Nokia 1830 PSS product family, as well as other older product families.

QUESTION 26

What does it take to get connected to the NSP platform?

- A. A browser and the NSP IP address; and from the landing page, the NSP application should be downloaded and launched.
- B. A browser and the NSP IP address. Then, a browser plugin needs to be installed and the laptop rebooted before the NSP can be correctly reached.
- C. A browser, the NSP IP address, and the credentials to access the web-based interface (WebUI).
- D. The NSP package should be downloaded from the Nokia website and properly licensed for the specific workstation to be used.

Correct Answer: C

Section:

Explanation:

To get connected to the Nokia Service Platform (NSP) platform, you need a browser and the NSP IP address. Then, you need the credentials to access the web-based interface (WebUI) for the NSP platform. Once you have these, you can access the NSP platform from a web browser.

QUESTION 27

Is it possible to mix PSS-24x and PSS-8x shelves In an SWDM configuration?

- A. Yes, as both can be equipped within the same node
- B. No, as they are not compatible and cannot be used within the same node
- C. Yes, but the PSS-24X shelf must be configured as a master
- D. Yes, but the PSS-8X shelf must be configured as a master

Correct Answer: B

Section:

Explanation:

No, it is not possible to mix PSS-24x and PSS-8x shelves in an SWDM (Short Wavelength Division Multiplexing) configuration. The two shelves are not compatible, and cannot be used within the same node.

QUESTION 28

What is the purpose of the NFM-T node synchronization?

- A. The partial or full node synchronization allows several entities/items defined at node level to be retrieved into the NFM-T database (upload).
- B. The partial or full node synchronization allows several entities/items defined at NFM-T level to be written into the node database (download).
- C. The partial or full node synchronization allows several entities/items defined at EPT level to be retrieved into the NFM-T database (upload from design).
- D. The partial or full node synchronization allows several entities/items defined at NFM-T level to be exported into an XML file, to be used as input for EPT (download to design).

Correct Answer: B

Section:

Explanation:

This is done in order to keep the NFM-T database in sync with the nodes in the network. The synchronization process allows the NFM-T to keep track of any changes that are made to the nodes, such as new nodes added, nodes removed, and so on. By synchronizing the node database with the NFM-T, network administrators can ensure that their network is up to date and running efficiently.

QUESTION 29

Which statement is correct about node synchronization?

- A. Full synchronization retrieves the correlated alarms from the node
- B. Node synchronization is executed to test the reachability of a node
- C. Node synchronization is executed to align the time of the node to the time of the NFM-T platform
- D. Full synchronization retrieves all items from the node (NE parameters, Ports, Alarms, Internal Links, etc)

Correct Answer: D

Section:

Explanation:

Node synchronization is a process of keeping the NFM-T database in sync with the nodes in the network. The synchronization process will download all the items from the node, including NE parameters, ports, alarms, internal links, etc., to the NFM-T database. This ensures that the NFM-T database is up to date and the network is running efficiently.

QUESTION 30

How is it possible to check the activation status of GMRE on a node?

- A. The GMRE reachability can be tested via ping request from NFM-T
- B. The ControlPlane status column on the node list displays the GMRE status for the selected node
- C. The GMRE activation status is reported in the supervision state column on the node list
- D. The GMRE activation status is reflected on the color of the icon representing the node

Correct Answer: C

Section:

Explanation:

The GMRE activation status is reported in the supervision state column on the node list. The supervision state column displays the GMRE status of the node, which is either "Activated" or "Not Activated". This allows the user to quickly check the GMRE activation status of a node without having to ping the node from the NFM-T platform.

