

Practice Exam Questions for: Nokia Optical Diagnostics and Troubleshooting (exam number: 4A0-265)

The following questions will test your knowledge and prepare you for the Nokia Optical Diagnostics and Troubleshooting exam. Compare your responses with the Answer Key at the end of the document.

1. Which packs are crossed by services?
 - a. WR8s, CWR8s, amplifiers
 - b. Transponders, SVACs, WR8s, amplifiers, EC
 - c. Transponders, USRPNLs, CWR8s, amplifiers
 - d. Transponders, MVACs, power supplies, Raman pumps
2. Where can the OSC signal be generated /terminated?
 - a. The OSC signal is generated/terminated by ingress amplifiers.
 - b. There is a specific pluggable that generates / terminates the signal. It is equipped in both ingress and egress amplifiers.
 - c. The OSC SFP generates/terminates the signal. It is equipped in egress amplifiers only.
 - d. The OSC SFP generates/terminates the signal. It is equipped in ingress amplifiers only.
3. Which listing of EPT commissioning file data is most useful for troubleshooting power issues?
 - a. Egress per-channel output power; Per-channel power deviation; Minimum/maximum amplifier gain; Allowed amplifier delta gain; SCOT timeout interval
 - b. Egress per-channel output power; Per-channel power deviation; Minimum/maximum amplifier gain; Allowed amplifier delta gain; Auto tilt adjustment
 - c. Egress per-channel output power; Per-channel power deviation; Minimum/maximum amplifier gain; WSS overhead
 - d. All parameters/values reported under "Power Management Data" in the Excel commissioning report from the EPT

4. What happens if the user changes the per-channel optical power value in an ingress amplifier, SIG interface?
 - a. The system will change the configuration of the upstream boards within the node in order to achieve the new target value. This happens only after a power adjustment is triggered on the relevant amplifier.
 - b. The system will increase/decrease the VOA into the amplifier to achieve the new target value. This happens only after a power adjustment is triggered on the relevant amplifier.
 - c. Nothing. Since the parameter cannot be changed, the system will raise a power-related alarm, and the network should be recommissioned to clear it.
 - d. Power value alarms will be raised to highlight a discrepancy between the design and the current node configuration. This happens only after a power adjustment is triggered on the relevant amplifier.
5. What can be determined if the physical topology of a node matches the EPT schematic view?
 - a. The design is consistent with the current configuration. The node commissioning has been done correctly.
 - b. The physical topology is discovered by the node once it is cabled. If it is consistent with the design, it guarantees that the commissioning has been done correctly.
 - c. It cannot be determined that the node commissioning has been done correctly until the “commissioning” phase of the CPB process is running and completed correctly.
 - d. Although the design is consistent with the current configuration, the physical cabling may be different.
6. Which of the following best describes the differences between alarms and conditions?
 - a. Conditions include alarms, non-reported events and special node states (such as loopbacks). Conditions can be customized through alarm profiles.
 - b. Alarms include conditions and non-reported events. Conditions include masked alarms and special node states (such as loopbacks).
 - c. Conditions include alarms, non-reported events and masked alarms. Alarms can be customized through alarm profiles.
 - d. Alarms include conditions. Conditions include non-reported events, masked alarms and special events (such as protection switches).
7. Which items can be found in the logs view?
 - a. Raise/clear times for alarms and conditions; General events; Pack reboots; Board switches; Traffic switches; Menus used by logged in users
 - b. Current alarms and conditions; General events; Pack reboots; Board switches; Traffic switches; Card plug-ins/plug-outs; Menus used by logged in users
 - c. Raise/clear times for alarms and conditions; General events; Pack reboots; Board switches; Traffic switches; Card plug-ins/plug-outs
 - d. Current alarms and conditions; General events; Pack reboots; Board switches; Traffic switches; Card plug-ins/plug-outs
8. Where can PMs/WT data be detected?
 - a. OTs; SFDs; CWR8s; Amplifiers; DCMs
 - b. OTs; CWR8s; Amplifiers; WR8s
 - c. OTs; ITLBs; CWR8s; Amplifiers; WR8s
 - d. OTs; CWR8s; Amplifiers; ITLUs
9. Where can a “facility” loopback be enabled?
 - a. On an OT line port only. The loopback is implemented toward the internal side of the board.
 - b. On an OT line port only. The loopback is implemented toward the line interface.
 - c. On OT line ports and client ports. In both cases, the loopback is implemented toward the internal side of the board.
 - d. On OT line ports and client ports. In both cases, the loopback is implemented toward the interface.

10. What is the result of issuing the following CLI command?

show interface 11STAR1A 1/11/L1 PM opt 0 0

- a. The system displays 15-min, current bin PM counters related to “Optical Power Transmitted” for a line interface of an 11STAR1A pack.
 - b. The system clears 15-min, current bin PM counters related to “Optical Power Transmitted” for a line interface of an 11STAR1A pack.
 - c. The command is entered incorrectly – the first “0” is not a valid value for that parameter.
 - d. The command is entered incorrectly – the first “0” is correct while the second “0” should not be entered.
11. Where is the “power management” sub-tab available in the node WebUI?
- a. In amplifier and OT line port tabs/windows.
 - b. In amplifier line port tabs/windows only.
 - c. In amplifier line port and CWR tabs/windows.
 - d. In amplifier, OT, CWR and WR boards tabs/windows.
12. Suppose that a fiber has been cut and then spliced back together. The line span is recovered. What alarms can be expected on the involved nodes?
- a. It depends on the duration of the fiber cut. If it was cut for less than 8 minutes, a “power adjustment required” alarm is raised.
 - b. It depends on the duration of the fiber cut. If it was cut for more than 8 minutes, a “power adjustment required” alarm is raised, but only if the user triggers a power adjustment.
 - c. No alarms will appear, as long as the span attenuation has not changed.
 - d. “Power adjustment required” alarm only, as long as the span attenuation has not changed.
13. What happens when the “Commissioning Status” cascade menu is set to “In Progress”?
- a. No further provisioning is allowed, not even by using the “force” flag.
 - b. Nothing changes. This flag is set by CPB to mark which degrees have been commissioned, without other implications.
 - c. An alarm is raised to warn the user about uncommissioned links.
 - d. No further spontaneous power management messages are exchanged on that degree. That is, no SCOT messages are automatically exchanged with the adjacent NE connected on that degree.
14. Are Wavelength Tracker (WT) measurements available on SFDs and DCMs?
- a. Neither SFDs nor DCMs support WT measurements because both are passive packs.
 - b. SFDs are passive packs and do not support WT measurements. DCMs are active packs and support WT measurements.
 - c. DCMs are passive packs and do not support WT measurements. SFDs are active packs and support WT measurements.
 - d. SFDs and typical DCMs are passive packs and do not support WT measurements. However, the latest releases of DCM equipment do support WT measurements.
15. Which network problems can be detected by using Wavelength Tracker?
- a. Incorrect fiber connections; Missing fibers; Damaged packs; Missing or unexpected channels; Malformed client frames.
 - b. Incorrect fiber connections; Missing fibers; Bent, damaged or dirty fibers/connectors; Damaged packs; Missing or unexpected channels.
 - c. Incorrect fiber connections; Missing fibers; Bent, damaged or dirty fibers/connectors; Damaged packs; Missing or unexpected channels; Incorrect inventory cable connections.
 - d. Incorrect fiber connections; Missing fibers; Bent, damaged or dirty fibers/connectors; Damaged packs; Malformed client frames; Incorrect inventory cable connections.

16. Is it possible to get Wavelength Tracker measurements of the whole optical chain by checking a single node?
 - a. No, as the WT view is per node only. Every node in the chain must be checked.
 - b. Yes, but only through CLI.
 - c. Yes, both through WebUI (tabular or bars) and through CLI.
 - d. Yes, in a tabular view through WebUI or through CLI.
17. Which of the following provides the most accurate descriptions of the given APR alarms?
 - a. APR-LINE is raised because of generic issues on the line span. APR-LIMITED is raised because of generic issues on the ROADM infrastructure. APR-NODE is raised because of generic issues within a node.
 - b. APR-LINE is raised because of generic issues on the line span. APR-NODE is raised because of generic issues within a node.
 - c. APR-LINE is raised because of fiber cut issues on the line span. APR-LIMITED is raised because of fiber cut issues on the ROADM infrastructure. APR-NODE is raised because of fiber cut issues within a node.
 - d. APR-LINE is raised because of fiber cut issues on the line span. APR-NODE is raised because of fiber cut issues within a node.
18. The following alarms are raised against two adjacent nodes: LD input LOS, OTs LOS, APR-LINE (amplifiers and Raman pumps), Raman input LOS. What is the problem causing these alarms?
 - a. Hardware/software issue at the OSC level, but traffic is up as no “channel missing” alarms are raised.
 - b. Uni-directional fiber cut between the two adjacent nodes.
 - c. Bi-directional fiber cut between the two adjacent nodes.
 - d. Physical issue at one of the two Raman pumps.
19. What happens when the OSC pluggable fails?
 - a. Traffic is dropped, because the OSC signal is not detected anymore and the amplifiers enter APR mode.
 - b. Traffic stays up, and a “data link down” alarm is raised.
 - c. Traffic is down only if a Raman pump is configured on the link, for safety reasons.
 - d. Traffic is up but degraded, as the amplifiers enter APR mode and the launch power might not be sufficient to reach the other end.
20. What is the relationship between “encapsulation mode” and “payload type”?
 - a. Payload type regulates the way the payload is mapped within the data frame. When changing the payload type, the encapsulation mode changes accordingly.
 - b. Encapsulation mode regulates the way the payload is mapped within the data frame. When changing the encapsulation mode, the payload type changes accordingly.
 - c. These parameters are independent. When changing one of them, the other does not change automatically.
 - d. The encapsulation mode is related to the client rate, while the payload type is related to the line rate. When changing the payload type, the encapsulation mode changes accordingly.



Answer Key

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|------|-------|-------|
| 1. A | 8. B | 15. B |
| 2. D | 9. D | 16. D |
| 3. B | 10. A | 17. D |
| 4. A | 11. B | 18. C |
| 5. D | 12. D | 19. B |
| 6. C | 13. D | 20. B |
| 7. C | 14. A | |

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Nokia Oyj
Karaportti 3
FI-02610 Espoo, Finland
Tel. +358 (0) 10 44 88 000

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