

Practice exam questions for Nokia Fundamentals of Optical Network Design exam (4A0-250)

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

1. Which of the following statements best describes the administrator's rights?
 - a. An administrator can lock a design, preventing any action on it.
 - b. An administrator cannot put a design left in check-out status into check-in status.
 - c. The administrator can change the rights of a design, for instance, set the design to read-only mode.
 - d. An administrator can add a new planner on a WS-P server but cannot add other administrators.
2. How is it possible to fix mismatches between the WS-P design and the node configuration during the commissioning, provisioning, and balancing (CPB) process?
 - a. Mismatches must be resolved, deciding case by case which of the two (either design or actual network configuration) has to be amended in order to have them aligned.
 - b. Mismatches can be kept by ignoring the errors raised by CPB in case they do not affect the trail feasibility.
 - c. Mismatches are resolved by aligning the WS-P design to the configuration of the NE, which is done by uploading the node data onto the WS-P design.
 - d. CPB will decide, based on an internal algorithm, how to resolve the misalignment between the WS-P design and the node configuration.
3. Which of the following statements about the L-band is TRUE?
 - a. It can double the band available for transmission on a fiber, when both C and L bands are used.
 - b. Access to the L-band is granted through a NE software update.
 - c. It requires specific modulation formats designed for the L-band.
 - d. It is not compatible with the transmission in the C-band, which cannot be accessed when L-band is used.

4. Which of the following statements about coherent transmission is TRUE?
 - a. It requires Dispersion Compensation Modules (DCMs) to correct chromatic dispersion.
 - b. It requires EDFA amplification approximately every 30 km.
 - c. It is supported by specific Equipment Controller (EC) releases.
 - d. It compensates chromatic dispersion with Digital Signal Processing (DSP) units, hence DCMs are not required.
5. Which of the following is a linear impairment?
 - a. Crosstalk
 - b. Fiber attenuation
 - c. Scattering (forward, backward or sideways) of the power
 - d. Self-phase modulation
6. Which of the following is NOT a piece of optical equipment hardware?
 - a. Dispersion Compensation Module (DCM)
 - b. Optical Channel Transport Unit - k (OTUk)
 - c. Wavelength Selective Switch (WSS)
 - d. Equipment Controller (EC)
7. Which of the following is NOT a suitable solution for overcoming linear impairment effects?
 - a. Amplifier
 - b. Signal splitter/combiner
 - c. Optimized (low loss) fiber
 - d. Dispersion Compensation Module (DCM)
8. Which of the following is the best explanation as to why the planning process is continuous?
 - a. The planning process is continuous because traffic routes are constantly recalculated based on traffic distribution.
 - b. The planning process requires constant monitoring of and adaptation to changes in network hardware and requirements.
 - c. The network management system modifies the commissioning parameters during the commissioning phase, thus a network re-planning is required.
 - d. The amplifiers require reconfiguration periodically, which is a long manual process.
9. Which one of the following is NOT an input for the network design steps?
 - a. Traffic matrix
 - b. List of network sites
 - c. Commissioning report
 - d. Table of fiber parameters
10. What is the Bill of Material (BOM) used for?
 - a. To obtain the list of hardware to provision the nodes according to WS-P design.
 - b. To calculate the availability of a network.
 - c. To buy the spare parts required to guarantee a certain availability of the network.
 - d. To set the power level during the commissioning of the nodes.

11. What is a “Site”?
 - a. The attribute of the node that specifies the address.
 - b. A geographical location that contains one or more nodes.
 - c. A container of designs.
 - d. A container of segments between adjacent nodes.
12. In which of the following steps of the design process is WS-P NOT beneficial?
 - a. Generating configuration files
 - b. Analyzing the traffic demands
 - c. Defining the network elements
 - d. Computing the network availability
13. Which of the following is NOT a main step in the WS-P design workflow?
 - a. Create
 - b. Validate
 - c. Automate
 - d. Commission
14. What happens if the fiber parameters are NOT accurately modeled in WS-P?
 - a. The costs of the design cannot be calculated carefully.
 - b. The installation report cannot be generated, and the equipment cannot be installed.
 - c. WS-P cannot compute a complete valid design.
 - d. On the real NEs, the commissioning phase might fail and subsequent corrective actions on the design might be needed.
15. Under which condition is WS-P working in “Restricted Modality”?
 - a. When the WS-P server is accessed in read-only mode
 - b. When Classic UI is opened
 - c. When it runs with a license with restricted privileges
 - d. When multiple jobs are running simultaneously on the server
16. What are templates mainly used for?
 - a. To create sites and trails according to predefined parameters
 - b. To create users with a certain profile
 - c. To generate reports with a certain layout
 - d. To save designs with customized properties
17. Which of the following is NOT a justification for the shelf-size minimization requirement?
 - a. Available room for the equipment to be installed
 - b. Maximum electrical power consumption available on the line
 - c. Line isolation constraints
 - d. Cost limits
18. Which WS-P report can be used for the node deployment?
 - a. Installation report
 - b. Physical layer report
 - c. Channel utilization report
 - d. Design status details report

19. Which WS-P report can be used to configure the settings of one or more amplifiers?
- a. Installation
 - b. Physical layer
 - c. Channel utilization
 - d. Power commissioning
20. Which of the following statements about FlexGrid is TRUE?
- a. FlexGrid allows multiple instances of the same wavelength to be dropped from the same drop module.
 - b. Channels in FlexGrid systems can be allocated by selecting only one of the two possible granularity options: 50Ghz or 100Ghz.
 - c. The key component of a FlexGrid is the Multi Cast Switch (MCS).
 - d. FlexGrid can optimize channel allocation when signals are transmitted by using different modulation formats.



Answer Key

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

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