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Exam : **4A0-100**

Title : Nokia IP network and
Service fundamentals

Version : DEMO

1.Which of the following is NOT a goal of a layered protocol stack?

- A. To exchange information and divide it into simpler functions.
- B. To provide flexibility so that new protocols can be easily added.
- C. To reduce protocol overhead.
- D. To relieve some devices of some unnecessary tasks.

Answer: C

Explanation:

A layered protocol stack is designed to simplify network communication by separating functionalities into distinct layers. Each layer has a defined role and communicates with the layers directly above and below it.

The main benefits of this model include:

Simplified design and implementation: Developers can focus on one layer without needing to understand the entire system.

Flexibility: New protocols can be developed and inserted at specific layers without redesigning the whole stack.

Interoperability: Standard interfaces allow different systems and vendors to work together. Isolation of functions: Errors and updates can be managed within one layer without impacting others.

However, reducing protocol overhead is not a primary goal of this model. In fact, the encapsulation and interaction between layers can sometimes introduce extra overhead. This overhead is a trade-off accepted to gain the other benefits listed above.

Reference: Nokia IP Networking Fundamentals Study Guide – Chapter 2: "Layered Protocol Architectures", Section: "Benefits and Goals of Layered Models"

2.Which of the following is a function of the Link layer?

- A. It is responsible for encapsulating packets into frames for transmission on physical media.
- B. It is responsible for encapsulating packets into IP datagrams and routing them.
- C. It is responsible for encapsulating application data into TCP/UDP messages.
- D. It is responsible for the timing of the signals on physical media.

Answer: A

Explanation:

The Link layer, also known as the Data Link layer in the OSI model, is responsible for encapsulating packets from the Network layer into frames suitable for transmission over the physical medium. This process includes adding headers and trailers to the packet to create a frame, which contains necessary information for error detection, addressing, and control.

According to the OSI model, the Data Link layer serves as the intermediary between the Network layer and the Physical layer. It ensures that data is packaged into frames and manages the access to the physical transmission medium.

Option A correctly describes this function.

Option B pertains to the Network layer, which is responsible for encapsulating data into IP datagrams and determining the routing of these datagrams across networks.

Option C relates to the Transport layer, which handles the encapsulation of application data into transport layer segments, such as TCP or UDP messages.

Option D is a function of the Physical layer, which deals with the transmission and reception of raw bitstreams over a physical medium, including the timing and synchronization of signals.

Reference: GeeksforGeeks: Data Link Layer in OSI Model

TechTarget: What is the data link layer in the OSI model?

3.Which of the following is NOT a characteristic of a Virtual Private Network (VPN)?

- A. Each customer's traffic is isolated from other customers.
- B. Service providers utilize a shared infrastructure to support multiple VPNs.
- C. Customer data is altered as it traverses a VPN.
- D. A VPN is created specifically to meet the requirements of each customer.

Answer: C

Explanation:

A Virtual Private Network (VPN) is designed to provide secure and private communication over a shared or public infrastructure.

Key characteristics of VPNs include:

Traffic Isolation: Each customer's traffic is kept separate from others, ensuring privacy and security.

Shared Infrastructure: Service providers can support multiple VPNs over the same physical infrastructure, optimizing resource utilization.

Customization: VPNs can be tailored to meet the specific requirements of individual customers, including security policies, routing, and quality of service.

However, customer data is not altered as it traverses a VPN. Instead, VPNs employ encryption and tunneling protocols to protect data integrity and confidentiality during transmission. The primary goal is to ensure that data remains unchanged and secure from end to end.

Reference: Nokia IP Networks and Services Study Guide – Chapter on VPN Services

4.Which of the following Nokia 7750 SR components is NOT part of the data plane?

- A. The Media Dependent Adapter (MDA)
- B. The Input/Output Module (IOM)
- C. The eXpandable Media Adapter (XMA)
- D. The Control Processor Module (CPM)

Answer: D

Explanation:

The Nokia 7750 SR architecture separates its operations into control plane and data plane functions.

The Data Plane includes hardware components responsible for forwarding traffic at line rate.

These components include:

MDA (Media Dependent Adapter) – interfaces with physical media.

IOM (Input/Output Module) – performs high-speed packet forwarding and processing.

XMA (eXpandable Media Adapter) – extends port capacity and media support.

The Control Plane includes the CPM (Control Processor Module), which is responsible for running routing protocols, managing configuration, system operations, and other control-related functions. The CPM does not participate in data forwarding and is thus not part of the data plane.

Reference: Nokia SRA Study Guide, Chapter: "System Architecture – 7750 SR Components"

Nokia IP Networks and Services Fundamentals – Section: Control and Data Plane Functions in SR Architecture

5.Which compact flash on a control processing module (CPM) of a Nokia 7750 SR stores the runtime

software image and the configuration file?

- A. CF1
- B. CF2
- C. CF3
- D. Both CF1 and CF2

Answer: C