# Multiple Choice Questions: Computing Networking

## Chapter 1: Network Models

1. What is the primary function of the OSI model?

* A. To define network hardware specifications.
* B. To establish a universal framework for networking protocols.
* C. To manage cloud computing resources.
* D. To create a centralized internet standard.

1. Which layer of the OSI model is responsible for data packet framing?

* A. Transport
* B. Network
* C. Data Link
* D. Physical

1. What does the term 'protocol stack' refer to?

* A. A collection of network layers working together.
* B. A single network protocol.
* C. Hardware devices in a network.
* D. A cloud computing service.

## Chapter 2: Internet Protocol Suite

1. What layer in the TCP/IP model handles data packet routing?

* A. Application
* B. Transport
* C. Network
* D. Physical

1. Which protocol is not part of the Transport Layer in the TCP/IP model?

* A. TCP
* B. UDP
* C. FTP
* D. Both A and B

1. How many layers are there in the updated TCP/IP model?

* A. 4
* B. 5
* C. 6
* D. 7

## Chapter 3: Network Segmentation

1. What is the main goal of network segmentation?

* A. To enhance internet speed.
* B. To limit cybersecurity attack surfaces.
* C. To centralize network control.
* D. To reduce hardware costs.

1. Which of the following technologies is not used in network segmentation?

* A. VLAN
* B. Firewalls
* C. VRF
* D. DNS

1. What is microsegmentation?

* A. Dividing a network into smaller sections.
* B. Applying granular controls to individual workloads.
* C. Creating multiple physical networks.
* D. Enhancing IP address schemes.

1. Which device operates only at the Physical Layer of the OSI model?

* A. Switch
* B. Repeater
* C. Router
* D. Bridge

1. What is the main function of a bridge in a network?

* A. Connect multiple LANs using different protocols.
* B. Filter content by reading MAC addresses.
* C. Amplify network signals.
* D. Route data packets across WANs.

1. Layer 2 switches primarily operate on which OSI layer?

* A. Physical
* B. Data Link
* C. Network
* D. Transport

1. What is the primary difference between IPv4 and IPv6?

* A. IPv6 supports more address spaces than IPv4.
* B. IPv4 is faster than IPv6.
* C. IPv4 uses hexadecimal notation while IPv6 uses decimal.
* D. IPv6 is compatible with fewer devices.

1. What does CIDR stand for in networking?

* A. Centralized Internet Data Routing
* B. Classless Inter-Domain Routing
* C. Clustered Infrastructure Data Resource
* D. Certified Internet Data Regulation

1. What is the standard subnet mask for a /24 network?

* A. 255.255.0.0
* B. 255.255.255.0
* C. 255.0.0.0
* D. 255.255.255.255

1. Which of the following is a benefit of network segmentation?

* A. Increased hardware costs
* B. Reduced cybersecurity attack surface
* C. Limited scalability
* D. Increased manual configuration needs

1. What is the primary function of software-defined access (SD-access)?

* A. Assign endpoints to network segments based on physical location.
* B. Tag packets for efficient policy application.
* C. Enhance firewall rule complexity.
* D. Restrict VLAN configurations.

1. What type of segmentation would you use to isolate PCI data for compliance?

* A. Physical segmentation
* B. Logical segmentation
* C. Microsegmentation
* D. All of the above