**Module 5 CCNA**

Explain How Automation Impacts Network Management

Automation streamlines network management by reducing manual configurations, improving accuracy, and enabling faster deployment of network changes. It also supports proactive monitoring and maintenance.

Compare Traditional Network with Controller-Based Networking

Traditional Networking: Manual configurations, decentralized control.

Controller-Based Networking: Centralized control using a network controller, automated management, and improved scalability.

Explain Virtualization

Virtualization: Creating virtual versions of physical components such as servers, storage devices, and networks. It enables efficient resource utilization and isolation of services.

Describe Characteristics of REST-based API

Stateless: Each request from a client to a server must contain all the information needed to understand and process the request.

Cacheable: Responses can be cached to improve performance.

Uniform Interface: Simplified and standardized interactions.

Layered System: Clients are not aware of intermediate layers.

Explain DNA Center

Cisco DNA Center: A centralized network management and command center that simplifies the design, provision, and assurance of enterprise networks. It uses automation and analytics to improve network performance and security.

Explain SDN

Software-Defined Networking (SDN): An approach to networking that uses software-based controllers to manage network resources and services dynamically. It decouples the control plane from the data plane, allowing for more flexible and efficient network management.