* What is Active Directory (AD), and what are its main components?
* How does Active Directory differ from a workgroup?
* What is the Global Catalog, and why is it important?
* Explain the role of the Domain Controller in Active Directory.
* What is the Active Directory Schema, and how is it managed?
* **Domain Services:**
* What is a domain, and what functions does it serve in Active Directory?
* Describe the process of promoting a server to a domain controller.
* What is the purpose of the Active Directory Sites and Services console?
* How do you create a new domain in Active Directory?
* How do you manage trust relationships between domains?
* **User and Group Management:**
* How do you create a user account in Active Directory Users and Computers?
* What are security groups, and how are they used in Active Directory?
* Describe the process of adding a user to a group in Active Directory.
* How do you delegate administrative tasks to specific users or groups?
* What is the difference between a user account and a computer account in Active Directory?
* **Group Policy:**
* What is Group Policy, and how is it used in Active Directory?
* How do you create and link a Group Policy Object (GPO)?
* Describe the inheritance and precedence of Group Policy settings.
* What are Group Policy Preferences, and how do they differ from Group Policy settings?
* How do you troubleshoot Group Policy application issues?
* **DNS and DHCP Integration:**
* How does Active Directory integrate with DNS?
* Describe the process of installing and configuring DNS on a domain controller.
* What is DNS scavenging, and how does it work?
* How does Active Directory integrate with DHCP?
* How do you configure DHCP options for Active Directory clients?
* **Trust Relationships and Forests:**
* What is a trust relationship, and why is it important in Active Directory?
* Describe the different types of trust relationships in Active Directory.
* How do you create and manage external trusts in Active Directory?
* What is a forest in Active Directory, and how does it differ from a domain?
* How do you create a forest trust between two Active Directory forests?
* **Replication and Site Topology:**
* What is Active Directory replication, and how does it work?
* How do you monitor Active Directory replication?
* Describe the purpose of the Knowledge Consistency Checker (KCC).
* What is the Active Directory replication topology, and how is it managed?
* How do you force Active Directory replication between domain controllers?
* **Installation and Configuration:**
* Describe the steps involved in installing Windows Server operating system.
* How do you configure networking settings during Windows Server installation?
* Explain the process of configuring roles and features in Windows Server.
* How do you manage server roles and features after installation?
* Describe the different editions of Windows Server and their key features.
* **Active Directory:**
* What is Active Directory, and how does it benefit an organization?
* How do you promote a Windows Server to a domain controller?
* Explain the purpose of Organizational Units (OUs) in Active Directory.
* How do you create and manage user accounts in Active Directory Users and Computers?
* Describe the process of configuring Group Policy Objects (GPOs) in Active Directory.
* **Networking and Security:**
* How do you configure IP addressing and TCP/IP settings in Windows Server?
* What is Windows Firewall, and how do you configure it?
* Describe the steps to configure VPN and DirectAccess in Windows Server.
* How do you implement Network Access Protection (NAP) in Windows Server?
* Explain the purpose of IPSec and how it enhances network security.
* **Server Management and Monitoring:**
* How do you manage Windows Server remotely using Server Manager?
* Explain the purpose of Windows Admin Center and its key features.
* Describe the steps to configure Windows Server Backup for data protection.
* How do you monitor server performance and resource utilization in Windows Server?
* What tools are available for troubleshooting Windows Server issues?
* **Virtualization and Hyper-V:**
* What is Hyper-V, and how does it facilitate server virtualization?
* Describe the steps to install and configure Hyper-V in Windows Server.
* How do you create and manage virtual machines in Hyper-V Manager?
* What is the difference between Generation 1 and Generation 2 virtual machines in Hyper-V?
* Explain the concept of virtual networking in Hyper-V and its configuration.
* **Storage and File Services:**
* How do you configure disk partitions and volumes in Windows Server?
* Describe the process of configuring RAID arrays in Windows Server.
* What is the purpose of Windows Storage Spaces, and how do you configure it?
* How do you create and manage shared folders in Windows Server?
* Explain the purpose of DFS (Distributed File System) and its benefits.
* **Web Services:**
* What is Internet Information Services (IIS), and how is it used in Windows Server?
* Describe the steps to install and configure IIS in Windows Server.
* How do you create and manage websites and virtual directories in IIS?
* Explain the purpose of Application Pools in IIS and how they work.
* How do you configure SSL certificates for secure web communication in IIS?
* **Backup and Disaster Recovery:**
* Describe the different types of backup and restore options available in Windows Server Backup.
* How do you configure scheduled backups and backup retention policies in Windows Server Backup?
* Explain the purpose of Volume Shadow Copy Service (VSS) in Windows Server.
* Describe the steps to perform a system state backup and restore in Windows Server.
* What are the best practices for disaster recovery planning in Windows Server environments?

**Technical Skills: desktop support**

* Operating Systems: Windows (versions), macOS, Linux
* Desktop Applications: Microsoft Office Suite, Email Clients, Web Browsers
* Remote Support Tools: Remote Desktop Protocol (RDP), TeamViewer, LogMeIn, Anydesk
* Troubleshooting Tools: Hardware and Software Diagnostics, Event Viewer, Performance Monitor
* System Imaging and Deployment: Windows Deployment Services (WDS), Microsoft Deployment Toolkit (MDT)
* Backup and Recovery: Windows Backup and Restore, File Recovery Tools
* Security Tools: Antivirus Software, Malware Removal Tools, Patch Management
* Networking: TCP/IP Networking, DHCP, DNS, LAN/WAN Configuration
* Customer Service and Communication: Effective Communication, Active Listening, Empathy
* Operating system installation and trouble shooting

**Technical Skills: mcsa**

* Operating Systems: Windows Server (2012, 2016, 2019), Windows Client (Windows 10)
* Active Directory: AD DS, Group Policy, DNS, DHCP, AD Certificate Services
* Virtualization: Hyper-V, VMware vSphere
* Networking: TCP/IP, VPN, LAN/WAN, Firewalls
* Scripting: PowerShell
* Security: Windows Defender
* Backup and Recovery: Windows Server Backup, Replication
* Active Directory Domain Services (AD DS)
* Group Policy Management
* DNS (Domain Name System) Configuration and Administration
* DHCP (Dynamic Host Configuration Protocol) Management
* Active Directory Certificate Services (AD CS)

**Technical Skills: ccna**

* Networking Protocols: TCP/IP, OSPF, EIGRP, BGP, VLANs, STP ,VTP, PVST
* Cisco Routing and Switching: Cisco IOS, Router/Switch Configuration, VLAN Configuration
* WAN Technologies: PPP
* Network Security: ACLs, VPN, Firewalls
* Voice and Video Technologies: VoIP, QoS, SIP
* network monitoring tools