MCSA 2016 SYLLABUS

1. **Installing and configuring Windows Server**

   - Introducing Windows Server 2016
   - Installing Windows Server 2016
   - Configuring Windows Server 2016
   - Preparing for upgrades and migrations
   - Migrating server roles and workloads
   - Windows Server activation models

2. **Overview of storage in Windows Server**

   - Overview of storage in Windows Server 2016
   - Implementing Data Deduplication
   - Configuring iSCSI storage
   - Configuring the Storage Spaces feature in Windows Server 2016

3. **Implementing directory service**

   - Deploying Active Directory domain controllers
   - Implementing service accounts
   - Azure AD
   - Cloning a domain controller
   - Explain Azure AD.

4. **Implementing AD FS**

   - Overview of AD FS
   - Deploying AD FS
   - Implementing AD FS for a single organization
   - Implementing Web Application Proxy
   - Implementing SSO with Microsoft Online Services

5. **Implementing Hyper-V**

   - Configuring the Hyper-V role in Windows Server 2016
   - Configuring Hyper-V storage
   - Configuring Hyper-V networking

- Configuring Hyper-V virtual machines
- Installing the Hyper-V server role
- Configuring virtual networking
- Creating and configuring a virtual machine

6. **Deploying and managing Windows and Hyper-V**
   - Overview of containers in Windows Server 2016
   - Preparing to deploy containers
   - Installing, configuring, and managing containers by using Docker
   - Installing Docker

7. **Implementing failover clustering**
   - Overview of failover clustering
   - Implementing a failover cluster
   - Configuring highly-available applications and services on a failover cluster
   - Configuring iSCSI storage
   - Configuring a failover cluster
   - Deploying and configuring a highly available file server
   - Validating the deployment of a highly available file server
   - Configuring CAU on the failover cluster

8. **Implementing failover clustering with Windows Server 2016 Hyper-V**
   - Overview of the integration of Hyper-V Server 2016 with failover clustering
   - Implementing Hyper-V virtual machines on failover clusters
   - Implementing Windows Server 2016 Hyper-V virtual machine migration
   - Implementing Hyper-V Replica
   - The Hyper-V Failover clustering testing environment
   - Configuring Hyper-V Replica
   - Configuring a failover cluster for Hyper-V
   - Configuring a highly available virtual machine

9. **Planning and implementing an IPv4**
   - Planning IPv4 addressing
   - Configuring an IPv4 host
   - Managing and troubleshooting IPv4 network connectivity

- Verifying the IPv4 communication
- Troubleshooting IPv4

10. Implementing DHCP

- Overview of the DHCP server role
- Deploying DHCP & DHCP failover
- Managing and troubleshooting DHCP
- Planning the DHCP server implementation
- Implementing the DHCP configuration
- Validating the DHCP implementation

11. Implementing IPV6

- Overview of IPv6 addressing
- Configuring an IPv6 host
- Implementing IPv6 and IPv4 coexistence
- Transitioning from IPv4 to IPv6
- Reviewing the default IPv6 configuration
- Implementing DHCPv6

12. Implementing DNS SERVER

- Implementing DNS servers
- Configuring zones in DNS
- Configuring name resolution between DNS zones
- Configuring DNS integration with Active Directory Domain Services (AD DS)
- Configuring advanced DNS settings
- Integrating DNS with AD DS
- Implement DNS servers.
- Configure zones in DNS.
- Configure name resolution between DNS zones.
- Configure DNS integration with AD DS.
- Configure advanced DNS settings.

13. Implementing and managing IPAM

- Overview of IPAM
- Deploying IPAM

- Managing IP address spaces by using IPAM
- Installing the IPAM Server feature
- Provisioning the IPAM Server
- Managing IP address spaces by using IPAM

14. Configuring advanced networking

- Overview of high performance networking features
- Configuring advanced Microsoft Hyper-V networking features
- Creating and using Hyper-V virtual switches
- Configuring and using the advanced features of a virtual switch
- Configure the advanced Microsoft Hyper-V networking features.

15. Implementing Software Defined networking

- Overview of Software Defined Networking
- Implementing network virtualization
- Implementing Network Controller

16. Managing objects in AD

- Managing user accounts
- Managing groups in AD DS
- Managing computer objects in AD DS
- Using Windows PowerShell for AD DS administration
- Implementing and managing OUs

17. Administering AD DS

- Delegate administration for OUs
- Creating and modifying AD DS objects with Windows PowerShell

18. Domain and trust management in AD DS

- Implementing forest trusts
- Implementing child domains in AD DS

19. Implementing and administering AD DS sites and replication

- Overview of AD DS replication
- Configuring AD DS sites

- Configuring and monitoring AD DS replication
- Modifying the default site
- Creating additional sites and subnets
- Configuring AD DS replication

20. Implementing Group Policy

- Introducing Group Policy
- Implementing and administering GPOs
- Group Policy scope and Group Policy processing
- Troubleshooting the application of GPOs
- Creating and configuring GPOs
- Managing GPO scope
- Implementing administrative templates
- Configuring Folder Redirection, Software Installation, and Scripts
- Configuring Group Policy preferences

21. Securing Active Directory Domain Services

- Implementing security policies for accounts, passwords, and administrative groups
- Deploying and configuring an RODC
- Creating and associating a group MSA

22. Deploying and managing AD CS

- Deploying CAs
- Administering CAs
- Troubleshooting and maintaining CAs
- Deploying and managing certificate templates
- Managing certificate deployment, revocation, and recovery
- Configuring certificate templates
- Enrolling and using certificates

23. Implementing and administering AD RMS

- Overview of AD RMS
- Deploying and managing an AD RMS infrastructure
- Configuring AD RMS content protection
- Installing and configuring AD RMS

- Configuring AD RMS templates

24. Implementing AD DS synchronization with Microsoft Azure AD

- Planning and preparing for directory synchronization
- Implementing directory synchronization by using Azure AD Connect
- Managing identities with directory synchronization
- Preparing for directory synchronization
- Configuring directory synchronization
- Managing Active Directory users and groups

25. Recovering objects in AD DS

- Backing up and restoring AD DS
- Recovering objects in AD DS
- Enabling recycle bin

26. STORAGE SPACE & NLB (network load balancing)

- Planning and Implementing Storage Space
- Planning and Implementing a DFS(distributed file system)
- Installing and configuring High available DFS file share
- Network load balancing Overview
- Installing and configuring NLB for web servers
- Installing and configuring NLB cluster
- Planning and Implementing NLBImplementing a High Availability Solution Using NLB

27. ONLINE BACKUP

- Creation of recovery service vault for online backup
- Prerequisite for online backup running windows updates
- Install and configure Microsoft azure backup server
- Download vault credentials for online backup from azure