Chapter # 4
Chapter 4 – Microsoft Windows Server 2008 Active Directory Infrastructure

✅ **Part I: Short Questions**

Q1. What is Active Directory?

- **Active Directory (AD)** is a Microsoft service that stores and organizes information about network objects (users, groups, computers).

- Provides **centralized authentication and management**.

Q2. Write two roles of Active Directory.

1. Provides **centralized user authentication**.

2. Manages network resources (files, printers, policies).

Q3. Describe the function of Active Directory Domain Services (AD DS) in a domain.

- **AD DS** stores directory data and manages communication between domain controllers and users.

- Functions:

    1. User logon authentication.

    2. Enforcing group policies.

Q4. What is the feature of Active Directory?

- Hierarchical organization (forest, domains, OUs).

- Centralized management of users and devices.

- Scalability for large networks.

Q5. What are the services of Active Directory?

1. **AD DS** – Authentication and directory management.

2. **AD LDS** – Lightweight directory services.

3. **AD CS** – Certificate services.

4. **AD FS** – Federation services (single sign-on).

5. **AD RMS** – Rights management.

Q6. What is the role of Active Directory?

- Provides **centralized security and resource management** in a Windows Server network.

Q7. Define User.

- A **user** is an object in Active Directory representing a person who can log in and access network resources.

Q8. Describe DHCP.

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- **Dynamic Host Configuration Protocol** automatically assigns IP addresses and network settings to clients.

Q9. Define DNS.

- **Domain Name System** translates domain names (example.com) into IP addresses (192.168.1.1).

Q10. Define Groups.

- A **group** is a collection of users in Active Directory for easy management and permission assignment.

- Example: "IT Staff" group with access to IT resources.

✅ Part II: Long Questions

Q1. What is Active Directory? Also describe its advantages and disadvantages.

- **Definition:** A Microsoft service for centralized storage and management of network objects.

- **Advantages:**

  - o Centralized authentication.

  - o Easy management of resources.

  - o Enhanced security with group policies.

  - o Scalable for large organizations.

- **Disadvantages:**

  - o Complex to configure.

  - o Server failure affects entire domain.

  - o Requires trained administrators.

Q2. Write down the features in Windows Server 2008 R2.

1. **Improved Active Directory Administrative Center.**

2. **Read-Only Domain Controller (RODC)** for branch offices.

3. **Fine-grained password policies.**

4. **AD Recycle Bin** for restoring deleted objects.

5. **Improved Group Policy management.**

Q3. Write down the installation steps of Active Directory.

1. Open **Server Manager → Roles → Add Roles**.

2. Select **Active Directory Domain Services**.

3. Follow wizard and install AD DS role.

4. Run dcpromo command.

5. Create a new forest/domain.

6. Set domain name (e.g., exam.com).

7. Configure DNS and database paths.

8. Set Directory Services Restore Mode password.

9. Restart system → Domain Controller ready.

Q4. Write down the configuration steps of Active Directory.

1. Open **Active Directory Users and Computers**.

2. Create **OUs (Organizational Units)**.

3. Add **Users and Groups**.

4. Apply **Group Policies** using GPMC.

5. Configure DNS/DHCP if required.

Q5. Write down the de-installation steps of Active Directory.

1. Run dcpromo command.

2. Select "Remove Active Directory".

3. If last domain controller → remove forest.

4. Provide admin password.

5. Demote server.

6. Restart system → AD removed.

🎇 **Extra Important Questions**

Q1. What is an Organizational Unit (OU)?

- A container in AD used to organize users, groups, and computers.

Q2. What is Group Policy in Active Directory?

- A feature to enforce **security and configuration settings** across all users/computers.

Q3. What is difference between Domain, Tree, and Forest in AD?

- **Domain:** A group of network objects.

- **Tree:** A collection of domains in a hierarchy.

- **Forest:** A collection of trees that share a schema.

Q4. What is Read-Only Domain Controller (RODC)?

- A domain controller that holds a read-only copy of Active Directory, used in branch offices for security.