**Question 3 Explain the steps involved in setting up a virtual network in Azure. What considerations should be taken into account during the setup?**

Ans:-

**Setting up a Virtual Network in Azure.**

**Step 1: Create a Virtual Network**

1. Log in to the Azure portal and navigate to the Virtual networks page.
2. Click + Create to create a new virtual network.
3. Enter a name for your virtual network, select a subscription, and choose a resource group.
4. Select a location for your virtual network.

**Step 2: Configure IP Addresses and Subnets**

1. In the IP Addresses tab, enter a valid CIDR block for your virtual network.
2. Create subnets by clicking + New subnet and entering a name, subnet address range, and subnet mask.

**Step 3: Configure Security and Azure Bastion**

1. In the Security tab, enable Azure Bastion to securely connect to your virtual machines from the internet.
2. Configure network security groups (NSGs) to filter incoming and outgoing traffic**.**

**Step 4: Create Virtual Machines**

1. Navigate to the Virtual machines page and click + Create.
2. Enter a name for your virtual machine, select a subscription, and choose a resource group.
3. Select a virtual machine image and configure the virtual machine settings.

**Considerations during Setup.**

1. **Subscription and Resource Group:** Ensure you have an active Azure subscription and create a new resource group for your virtual network.
2. **Region:** Choose a region that meets your requirements and is close to your users.
3. **Security:** Enable Azure Bastion to securely connect to your virtual machines from the internet.
4. **IP Addresses and Subnets:** Plan your IP address space and subnet configuration carefully to ensure scalability and flexibility.
5. **Virtual Machine Configuration:** Configure your virtual machines with the required settings, such as name, region, and resource group.