**Network Setup and Configuration Steps:**

1. **Initial Network Setup:**
   * Set up a basic network comprising two Cisco 2950T-24 switches, four PCs, 1 router, and 1 wireless router.
2. **Physical Connections:**
   * Connected devices using appropriate cabling:
     + Router 1 (Fa 0) to Wireless Router (0/0) using a copper straight-through cable.
     + Router 1 (Fa 1) to Switch 1 (GigabitEthernet0/1) using a copper straight-through cable.
     + Switch 1 (GigabitEthernet0/2) to Switch 2 (GigabitEthernet0/2) using a copper crossover cable.
     + Switch 1 ports connected to PCs (PC1 to PC4) with copper straight-through cables.
3. **Router Configuration:**
   * Configured Router 1 with essential settings:
     + Set passwords, configured banners, and defined VLANs.
     + Assigned a new hostname and set up basic routing configurations.
4. **Switch Configuration:**
   * Configured Switches (Switch 1 and Switch 2):
     + Implemented passwords, configured banners, VLANs, IP addresses, and default gateways.
5. **IP Address Assignment:**
   * Assigned IP addresses to devices:
     + PC1: 192.168.1.25/24
     + PC2: 192.168.1.26/24
     + PC3: 192.168.1.28/24
     + PC4: 192.168.1.29/24
     + Switch: 192.168.1.27/24
     + Router 1: 192.168.1.30
6. **VLAN Setup and Inter-VLAN Routing:**
   * Created VLANs to segregate PCs:
     + VLAN 10: PC1 and PC3
     + VLAN 20: PC2 and PC4
   * Configured Router on a Stick to enable communication between VLANs.
7. **Testing and Verification:**
   * Verified inter-VLAN communication by conducting ping tests between PCs within VLANs 10 and 20.
8. **Wireless Router Configuration:**
   * Configured the wireless router:
     + Set up router password and enabled WPA2 Personal security with AES encryption.
9. **Wireless Connectivity Testing:**
   * Successfully tested connectivity using a laptop equipped with a wireless module connected to the wireless router.