

WiFi Training Program 2025

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Question-10:

List down the Wi-Fi topologies and use cases of each one.

Wi-Fi Topologies and Their Use Cases

1. Infrastructure Mode

- **Description:** Devices connect through a central access point (AP).
- **Use Case:** Home Wi-Fi, office networks, public hotspots.

2. Ad-Hoc Mode (Peer-to-Peer)

- **Description:** Devices communicate directly without an AP.
- **Use Case:** Temporary file sharing, gaming, disaster recovery.

3. Mesh Topology

- **Description:** Multiple nodes (APs) interconnect dynamically.
- **Use Case:** Large-area coverage (smart cities, industrial IoT).

4. Star Topology

- **Description:** All devices connect to a single AP.
- **Use Case:** Homes, small businesses, cafes.

5. Tree (Hybrid) Topology

- **Description:** Multiple APs connect in a hierarchical structure.
- **Use Case:** University campuses, corporate buildings.

6. Point-to-Point (P2P) & Point-to-Multipoint (P2MP)

- **Description:** Direct long-range wireless links between nodes.
- **Use Case:** Wireless bridges, rural broadband, CCTV surveillance.