Q4. Explain the scanning process and its types in detail

Process:

- Channel-by-channel scan.
- Collection of SSIDs and BSSIDs.
- Evaluation of signal strength and supported capabilities.
- Selection of best AP.

Types:

1. Passive Scanning:

Client listens for beacon frames.

No active transmission.

Energy efficient but slower.

2. Active Scanning:

Client sends probe request frames.

Access points reply with probe responses.

Faster and helps in fast roaming.