



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

COIMBATORE-35

Accredited by NBA-AICTE and Accredited by NAAC – UGC with A++ Grade

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai



19EEE305 / EMBEDDED SYSTEMS III YEAR / VI SEMESTER

UNIT-V: EMBEDDED SYSTEM APPLICATION DEVELOPMENT

INTRODUCTION TO WIRELESS NETWORKING



Wireless Networking Overview

- Definition and importance
- Types: WLAN, WPAN, WWAN
- Comparison with wired networking
- Applications in modern networks
- Growth of wireless technologies

How Wireless Networks Works





Wireless Networking Technologies



- WiFi, Bluetooth, ZigBee
- Cellular: 4G, 5G
- Infrared and Satellite
- NFC and RFID
- IoT Applications

How Wireless Networks Works





WiFi Fundamentals

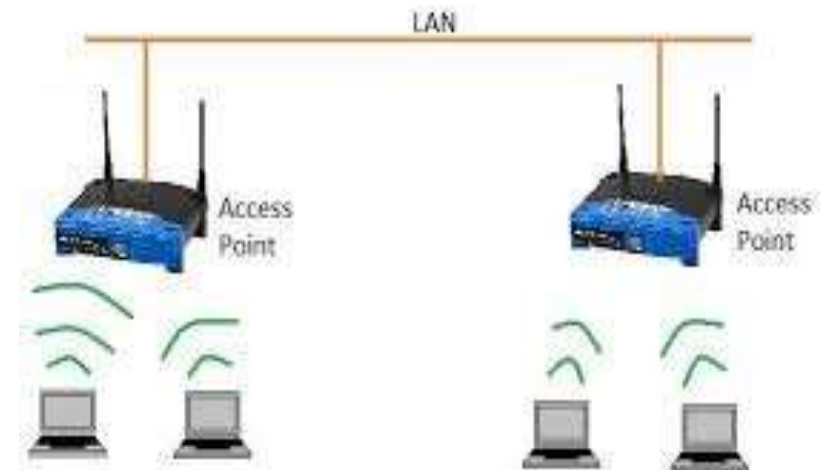
- Based on IEEE 802.11 standards
- Operates on 2.4GHz, 5GHz, and 6GHz bands
- Components: Access Point, Client devices
- Used for LAN connectivity
- High-speed data transmission





WiFi Features

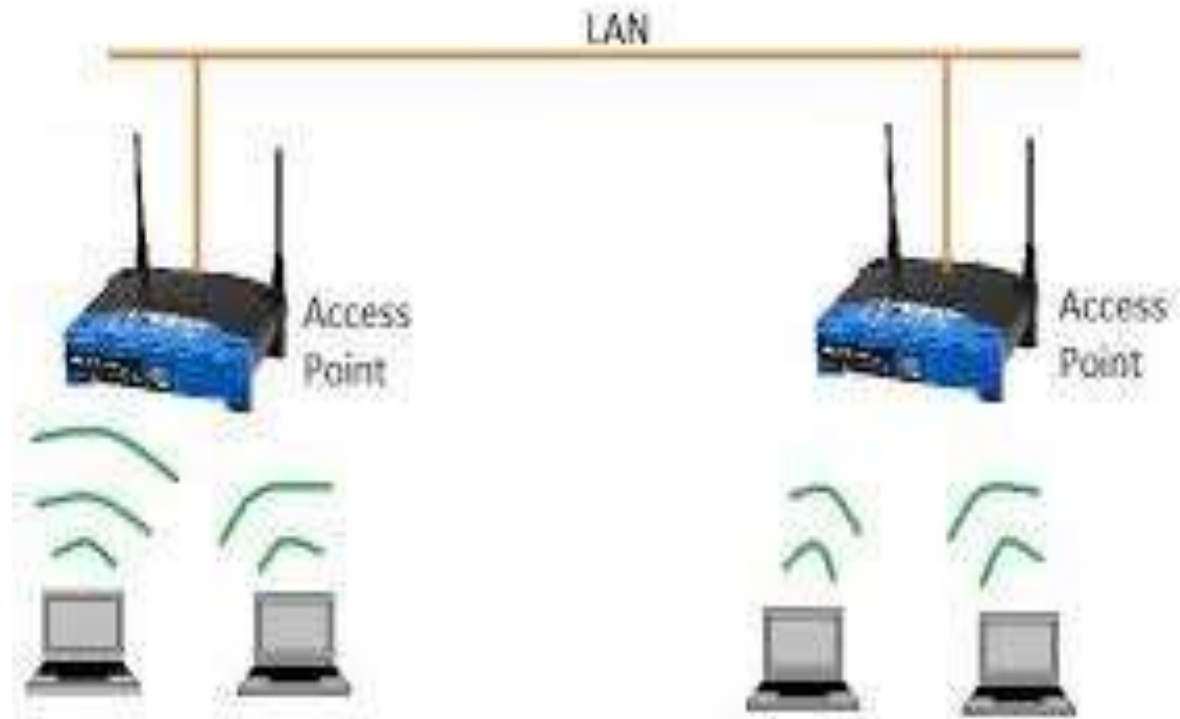
- Modulation Techniques: OFDM, DSSS
- Security: WPA2, WPA3
- SSID, Channels, Roaming
- Interference management
- Throughput and range considerations





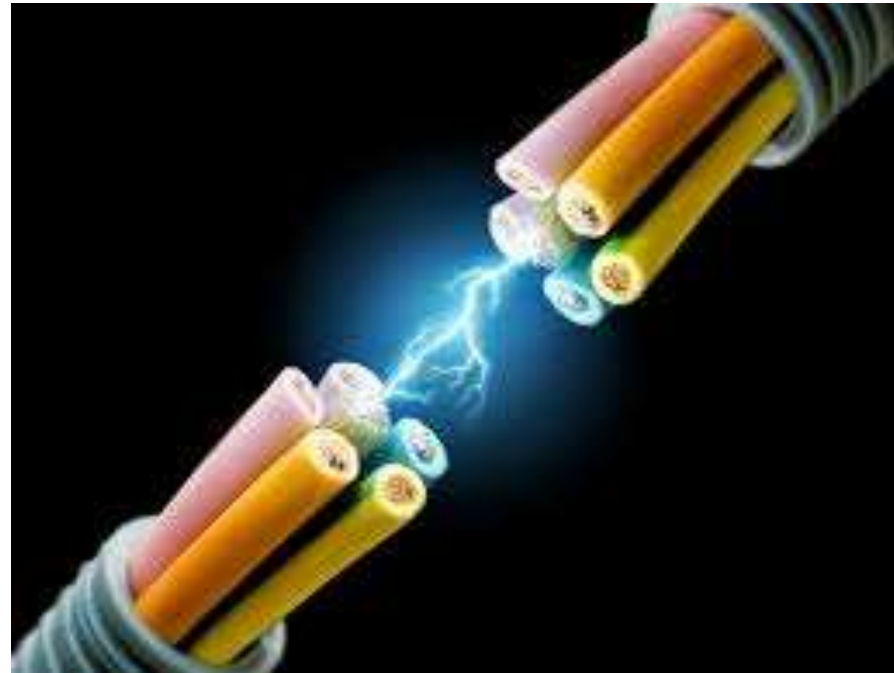
WiFi Applications

- Home and enterprise networking
- Public hotspots
- WiFi calling and VoIP
- IoT and smart homes
- Streaming and gaming





RECAP....



...THANK YOU

