Faculty of Technology
Marwadi University
Department of Information and Communication Technology

Study Guide for MID Exam

Student should know

- Infrastructure-based vs. Ad-hoc Networks
- Infrastructure-based: Centralized (e.g., WiFi with access point), scalable, better QoS.
- Ad-hoc: Decentralized, peer-to-peer (e.g., MANETs), dynamic topology.
- Wireless LANs vs. Wired LAN
- Cellular Systems
- Concepts: Cell, Frequency reuse, Handoff, Base Station, Mobile Switching Center.
- 1G to 5G evolution.
- Channel Assignment Strategies
- Sensor Networks (WSNs)
- Bluetooth, Wi-Fi, WiMAX, ZigBee (Architecture and Protocol stack)
- RFID
- Link Adaptation
- Adapting modulation and coding scheme (MCS)
- Routing Protocols (Static routing & Dynamic routing)
- Distance Vector routing protocol, Link state routing protocol, Routing Information protocol
- MANET routing Protocols (Proactive, Reactive and Hybrid)
- Classification of routing protocols (wireless Sensor Network)
- LEACH, SPIN
- Link Adaption Mechanisms
- Adapting modulation and coding scheme (MCS)
- Link Layer Mobility Mechanisms
- MAC address-based switching, Fast BSS Transition
- Location management: Home agent, foreign agent (in mobile IP)
- Network Layer Mobility (Macro and Micro mobility)
- Handoff Management Protocols
- Types of Handoffs: Hard (break-before-make), Soft (make-before-break).