

Unit I Topics Analysis from IT-602 Wireless and Mobile Computing Papers

1. All Unit I Topics

Antenna, radiation pattern, antenna types, antenna gain, propagation modes, types of fading, Model for wireless digital communication, multiple access techniques-SDMA, TDMA, FDMA, CDMA, DAMA, PRMA, MAC/CA, Cellular network organization, operations of cellular system, mobile radio propagation effects, handoff, power control, sectorization, traffic engineering, Infinite sources, lost calls cleared, grade of service, poisson arrival process.

2. Repeated Topics

2.1 Antenna, Antenna Types

- **Question:** What is an Antenna? Draw and explain any two types of antennas.
- **Related Question:** With neat sketch, explain the operation of helical antenna.

2.2 Multiple Access Techniques (SDMA, TDMA, FDMA, DAMA)

- **Question:** Why are need multiple access techniques? Write and explain any four techniques of multiple access.
- **Question:** Compare between SDMA, TDMA, FDMA and DAMA.
- **Related Question:** Explain how priority based multiple access schemes can be implemented?

2.3 Cellular Network Organization, Operations of Cellular System

- **Question:** With the help of suitable diagram explain the working of cellular network.
- **Question:** Draw and explain the architecture of cellular system. What is Hand off?

2.4 Handoff

- **Question:** Define the following terms i) Hand off ii) Power control iii) Sectorization.
- **Question:** Draw and explain the architecture of cellular system. What is Hand off?

3. Single-Time Topics

3.1 Power Control

- **Question:** Define the following terms i) Hand off ii) Power control iii) Sectorization.

3.2 Sectorization

- **Question:** Define the following terms i) Hand off ii) Power control iii) Sectorization.

3.3 Mobile Radio Propagation Effects

- **Question:** Discuss the various effects of mobile radio propagation.

3.4 Model for Wireless Digital Communication

- **Question:** With the help of a neat diagram, explain the reference model of wireless and mobile networks.

4. Topics That Never Appeared

- Radiation pattern
- Antenna gain
- Propagation modes
- Types of fading
- Multiple access techniques: CDMA, PRMA, MAC/CA
- Traffic engineering
- Infinite sources
- Lost calls cleared
- Grade of service
- Poisson arrival process