

AMTC21 MOBILE COMMUNICATION SYSTEM

UNIT-1 INTRODUCTION & THE CELLULAR CONCEPT

- 1.1 Introduction to wireless communication systems
- 1.2 Frequency reuse handoff, interference, trunking and grade of service,
- 1.3 Improving the capacity of cellular systems.

UNIT-2 MOBILE RADIO PROPAGATION

- 2.1 Large scale path loss, reflection, ground reflection, model (2 ray model), diffraction,
- 2.2 Practical link budget design using path loss models, small scale fading and multi-path, .
- 2.3 Small scale multipath propagation, parameter of multi-path channels,
- 2.4 Types of small scale fading, Raleigh and raleigh distribution diversity.

UNIT-3 ANALOG CELLULAR MOBILE SYSTEM

- 3.1 AMPS and ETACS system (overview call handling, air interface, N – AMPS).

UNIT-4 DIGITAL CELLULAR MOBILE SYSTEM

- 4.1 GSM services, features, system architecture, radio subsystem,
- 4.2 Channel types, frame structure,
- 4.3 Signal processing security aspects, network operations.

UNIT-5 LOW POWER WIRELESS COMMUNICATION SYSTEMS

- 5.1 Cordless telephone, CT2, DECT,PHS, PACS

UNIT-6 CDMA DIGITAL CELLULAR STANDARD (IS-95)

- 6.1 Frequency and channel specification,
- 6.2 Forward and reverse CDMA channel.

UNIT-7 MOBILE TERMINALS:

- 7.1 Types, radiated power, functional architecture,
- 7.2 Encryption, subscriber identify module.

UNIT-8 GLOBAL MOBILE SATELLITE SYSTEM

- 8.1 Introduction to iridium system, global star system,
- 8.2 ICO system, telederic system.

UNIT-9 THIRD GENERATION MOBILE COMMUNICATION

- 9.1 System IMT -2000, Introduction, radio aspects, network aspects.

Reference Books:

1. Mobile Communication Systems and Security” by Man Young Rhee
2. Mobile Communications” by Jochen Schiler