

**PAPER – XIII – ELECTIVE – II – MOBILE COMMUNICATIONS**

**UNIT – I**

Introduction: Applications – A market for mobile communications – some open research topics – A simplified reference model. WIRELESS TRANSMISSION: Frequencies for radio transmission – signals – Antennas – signal propagation – multiplexing – Modulation – spread spectrum – cellular Systems.

**UNIT – II**

Medium Access Control: Motivation for a specialized MAC – SDMA – FDMA – TDMA – CDMA – Comparison of S/T/F/CDMA. TELECOMMUNICATION SYSTEM: GSM – DECT – TETRA – UMTS and IMT – 2000.

**UNIT – III**

Satellite System: History – Applications – Basics – Routing – Localization – Handover – Examples. BROADCAST SYSTEMS: Overview – Cyclic repetition of data – Digital audio broadcasting – Digital video broadcasting.

**UNIT – IV**

Wireless Lan : Infrared Vs radio transmission – Infrastructure and adhoc networks – IEEE 802.11 – HIPERLAN – Bluetooth. WIRELESS ATM: Motivation for WATM – Wireless ATM working group – WATM services – Reference Model – functions – Radio access layer – Handover – Location Management – Addressing – Mobile quality of service – Access point control protocol.

**UNIT – V**

Mobile Network Layer: Mobile IP – Dynamic host configuration protocol – Adhoc networks: MOBILE TRANSPORT LAYER: Traditional TCP – Indirect TCP – Snooping TCP – Mobile TCP – Fast retransmit / fast recovery – Transmission / time-out freezing – selective transmission – Transaction Oriented TCP.

**Text Book:**

Jochen Schiller, “Mobile Communications”, Addison Wesley, Pearson Education, Asia 2000.