

Syllabus for B.Sc-IT Course at S.P. College, Srinagar

SEMESTER - VI

SUBJECT: WIRELESS AND MOBILE COMMUNICATION.

COURSE CODE BIT- 602

UNIT-I

Classification and types of wireless telephones, Introduction to cordless, fixed wireless (WLL), wireless with limited mobility (WLL-M) and (Fully) Mobil wireless phones.

Introduction to various generations of mobile phone technology future trends, Mobile originated vs. mobile terminated calls

UNIT-II

Electromagnetic spectrum, its use and allocation to well-known bands, Concepts of cells, cell boundary, sectorization, coverage area, frequency reuse, cellular networks and handoffs.

Wireless Transmission concepts: types of antennas, signal propagation, multi-path propagation, comparison of Frequency Division Multiplexing (FDM), Time Division Multiplexing (TDM) and Code Division Multiplexing (CDM) techniques

UNIT-III

Implementation of IS-95 CDMA, Concepts of CDMA channels. Forward and reverse CDMA channels for a cell/sector, Concept of code channels within a CDMA channel, Purpose of pilot, sync, paging, Access (forward and reverse) Traffic channels,

UNIT-IV

Global System for Mobile communication systems (GSM): basic architecture, terminology and interfaces, Component interfaces; MS, BTS, BSC, MSC; their basic functions and characteristics. Mobility management issues; types of handoffs, concepts of roaming and Registration.

Reference Books:

1. Jochen Schiller, "Mobile Communication", Pearson.
2. K.pahlavan, P.Krishnamurthy, "Principles of Wireless Networks", PHI.
3. Andrew Athenaem, "Computer Networks", PHI. (4th Edition)

