

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT
M.Sc. (I.T.) [Five Year Integrated Course]
M.Sc. (Information Technology)
Semester IX

Paper No : 901

L: 4, T:0, P:0 Hrs

Paper Title : Mobile Computing

- 1. Introduction to Mobile Computing and Personal Communications Services**
Mobility, Nomadic, Mobile and Ubiquitous computing,
Mobile Computing Architecture, Mobile Devices,
Mobile Computing Technology (H/W, S/W, Communication),
PCS Architecture, Mobility Management, Networks signaling,
- 2. Global System for Mobile Communication (GSM) system overview:**
GSM Architecture, Mobility Management, Network Signaling
- 3. General Packet Radio Service (GPRS)**
GPRS Architecture, GPRS Network Nodes
- 4. Wireless Application Protocol (WAP)**
The Mobile Internet Standards, WAP Gateway and Protocols,
Wireless Markup Language (WML)
- 5. Third Generation (3G) Mobile Services**
Introduction to International Mobile Telecommunications 2000 (IMT 2000)
Vision, Wideband Code Division Multiple Access (W-CDMA)
CDMA 2000, Quality of Services in 3G
- 6. Wireless Local Loop (WLL)**
Introduction to WLL Architecture, WLL Technologies
- 7. Global Mobile Satellite Systems**
Case studies of the IRIDIUM and GLOBALSTAR systems
- 8. Wireless Enterprise Networks**
Introduction to virtual Networks, Blue tooth Technology, IR,
Blue tooth Protocols

Main Reading:

1. "Wireless and Mobile Networks Architectures", by Yi-Bing Lin & Imrich Chlamtac, John Wiley & Sons, 2001
2. "Mobile and Personal Communication systems and services", by Raj Pandya, PHI 2001
3. "Guide to Designing and Implementing wireless LANs", by Mark Ciampa, Thomson learning, Vikas Publishing house, 2001
4. "Wireless Web Development" Ray Rischapter, Springer Publishing, 2000
5. "The Wireless Application protocol" by Sandeep Singhal, Pearson Education Asia 2000
6. "Third Generation Mobile Telecommunication systems, by P.Stavronlakis, Springer Publishers, 2001
7. "Code Division Multiple Access" by Vinay K. Garg
8. "Data Communication and Networking", 3rd Edition by Behrouz A. Forouzan, Tata McGrawhill