**I Year II Semester**                                                    **L   P   C**

**Code: 17CS264**                                                       **4   0   3**

# MOBILECOMPUTING
## (Elective-2)

**UNIT-I**
**Introduction:** Mobile Communications, Mobile Computing – Paradigm, Promises/Novel Applications and Impediments and Architecture; Mobile and Handheld Devices, Limitations of Mobile and Hand held Devices.
GSM – Services, System Architecture, Radio Interfaces, Protocols, Localization, Calling, Handover, Security, New Data Services, GPRS.

**UNIT–II**
**(Wireless) Medium Access Control (MAC):** Motivation for a specialized MAC (Hidden and exposed terminals, Near and far terminals),SDMA, FDMA, TDMA, CDMA, Wireless LAN/(IEEE802.11)

**UNIT–III**
**Mobile Network Layer:** IP and Mobile IP Network Layers, Packet Delivery and Handover Management, Location Management, Registration, Tunneling and Encapsulation, Route Optimization, DHCP.

**UNIT–IV**
**Mobile Transport Layer:** Conventional TCP/IP Protocols, Indirect TCP, Snooping TCP, Mobile TCP, Other Transport Layer Protocols for Mobile Networks.
**Database Issues:** Database Hoarding & Caching Techniques, Client-Server Computing & Adaptation, Transactional Models, Query processing, Data Recovery Process &QoS Issues.

**UNIT-V**
**Data Dissemination and Synchronization:** Communications A symmetry, Classification of Data Delivery Mechanisms, Data Dissemination, Broadcast Models, Selective Tuning and Indexing Methods, Data Synchronization –Introduction, Software, and Protocols.
**Mobile Adhoc Networks(MANETs):** Introduction, Applications & Challenge so faMANET, Routing, Classification of Routing Algorithms, Algorithms such as DSR, AODV, DSDV, etc. , Mobile Agents, Service Discovery.
**Protocols and Platforms for Mobile Computing:** WAP, Bluetooth, XML, J2ME, Java Card, PalmOS, Windows CE, Symbian OS, Linux for Mobile Devices, Android.

**TEXTBOOKS:**
1. Jochen Schiller ,"Mobile Communications",Addison-Wesley,SecondEdition,2009.
2. RajKamal,"MobileComputing",OxfordUniversityPress,2007,ISBN:0195686772

**REFERENCEBOOKS:**
1. ASOKEKTALUKDER,HASANAHMED,ROOPARYAVAGAL,"Mobile Computing,Technology Applications and Service Creation" Second Edition, McGraw Hill.
2. UWEHansmann, LotherMerk, MartinS.Nocklous, ThomasStober,"Principles of Mobile Computing," Second Edition, Springer.