21CSE12	MOBILE COMPUTING	L	T	P	C
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Course Objectives

Students can able to know about

- Basics of mobile telecommunication system.
- Network layer protocols and Ad-Hoc networks.
- Transport and application layer protocols.
- Different mobile platforms and application development.

UNIT I	INTRODUCTION	9 Hours

Introduction to Mobile Computing – Applications of Mobile Computing- Generations of Mobile Communication Technologies- Multiplexing – Spread spectrum -MAC Protocols – SDMA- TDMA- FDMA- CDMA

UNIT II	MOBILE TELECOMMUNICATION SYSTEM	9 Hours

Introduction to Cellular Systems – GSM – Services & Architecture – Protocols – Connection Establishment – Frequency Allocation – Routing – Mobility Management – Security – GPRS- UMTS – Architecture – Handover – Security

UNIT III	PROTOCOLS	9 Hours

Mobile IP – DHCP – AdHoc– Proactive protocol-DSDV, Reactive Routing Protocols – DSR, AODV , Hybrid routing –ZRP, Multicast Routing- ODMRP, Vehicular Ad Hoc networks (VANET) –MANET Vs VANET – Security.

UNIT IV	MOBILE ARCHITECTURE	9 Hours

Mobile TCP– WAP – Architecture – WDP – WTLS – WTP –WSP – WAE – WTA Architecture – WML

UNIT V	MOBILE OPERATING SYSTEM	9 Hours

Mobile Device Operating Systems – Special Constraints & Requirements – Commercial Mobile Operating Systems – Software Development Kit: iOS, Android, BlackBerry, Windows Phone – MCommerce – Structure – Pros & Cons – Mobile Payment System – Security Issues

UNIT VI	RECENT TRENDS	

Recent trends on Mobile Operating Systems

	TOTAL PERIODS: 45

Course Outcomes:

At the end of the course Student should be able to

- understand basics of Mobile Telecommunication Systems
- know about generations of telecommunication system
- know about the functionality of Transport and Applications Layers
- understand about various Mobile Operating System

Text books:

1. Jochen Schiller, ―Mobile Communications‖, PHI, Second Edition, 2003.

Reference Books:
1. Prasant Kumar Pattnaik, Rajib Mall, ―Fundamentals of Mobile Computing, PHI Learning Pvt.Ltd, New Delhi – 2012
2. Dharma Prakash Agarval, Qing and An Zeng, "Introduction to Wireless and Mobile systems",Thomson Asia Pvt Ltd, 2005.
3. Uwe Hansmann, Lothar Merk, Martin S. Nicklons and Thomas Stober, ―Principles of Mobile Computing, Springer, 2003.
4. William.C.Y.Lee,―Mobile Cellular Telecommunications-Analog and Digital Systems, Second Edition,TataMcGraw Hill Edition ,2006.