

**IT6601 MOBILE COMPUTING**

DETAILED SYLLABUS

**UNIT I INTRODUCTION**

Mobile Computing – Mobile Computing Vs Wireless Networking – Mobile Computing Applications – Characteristics of Mobile computing – Structure of Mobile Computing Application. MAC Protocols – Wireless MAC Issues – Fixed Assignment Schemes – Random Assignment Schemes – Reservation Based Schemes.

**UNIT II MOBILE INTERNET PROTOCOL AND TRANSPORT LAYER**

Overview of Mobile IP – Features of Mobile IP – Key Mechanism in Mobile IP – route Optimization. Overview of TCP/IP – Architecture of TCP/IP- Adaptation of TCP Window – Improvement in TCP Performance.

**UNIT III MOBILE TELECOMMUNICATION SYSTEM**

Global System for Mobile Communication (GSM) – General Packet Radio Service (GPRS) – Universal Mobile Telecommunication System (UMTS).

**UNIT IV MOBILE AD-HOC NETWORKS**

Ad-Hoc Basic Concepts – Characteristics – Applications – Design Issues – Routing – Essential of Traditional Routing Protocols – Popular Routing Protocols – Vehicular Ad Hoc networks (VANET) – MANET Vs VANET – Security.

**UNIT V MOBILE PLATFORMS AND APPLICATIONS**

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

**TEXT BOOK:**

1. Prasant Kumar Pattnaik, Rajib Mall, “Fundamentals of Mobile Computing”, PHI Learning Pvt. Ltd, New Delhi – 2012.

**OBJECTIVES:**

The student should be made to:

- Understand the basic concepts of mobile computing.
- Be familiar with the network protocol stack.
- Learn the basics of mobile telecommunication system.
- Be exposed to Ad-Hoc networks.
- Gain knowledge about different mobile platforms and application development.