

Devi Ahilya University, Indore, India Institute of Engineering & Technology				IV Year B.E. (Electronics &InstrumentationEngg.)			
Subject Code & Name	Instructions Hours per Week			Credits			
EIR8E3 MOBILE COMPUTING	L	T	P	L	T	P	Total
Duration of Theory Paper: 3 Hours	3	1	2	3	1	1	5

Learning objectives: To understand the principles and techniques of how computers use and share data in an environment in which location is not fix.

Prerequisites: Basic knowledge of Wireless communication and Networks.

Course Contents

Unit-I

Review of Wireless communication technologies. Mobile computing definition, difference between mobilecommunicationandmobilecomputing,Adaptability-keytomobilecomputing,mechanismsfor adaptation, Support for building Adaptive Mobile Applications-Transcoding Proxy, Odyssey, Rover models

Unit-II

Mobility Management:

Mobility Management, Location Management principles and techniques: registration area based location management, dynamic update schemes, location caching, replicating location information, flatandhierarchicalorganization,locationmanagementcasestudiesPCS,MobileIP

Unit-III

Data Dissemination and Management

Challenges,Publish-subscribe mode, information caching, Data Dissemination, mobile data caching, mobile cache Maintenance schemes, Mobile Web Caching

Unit-IV

Context Aware Computing:

Ubiquitous or Pervasive Computing, Context: various definitions and Types, Context Aware Computing and Applications, Middleware support, Middleware for application development: Adaption and Agents.

Unit-V

Service Discovery Middleware: Finding needed Services, Services, Discovery and Advertisement Protocols, Garbage Collection, Eventing, Security, Interoperability.

Learning Outcomes:

Upon Completing the Course, students will gain the knowledge of various issues involved in mobile

computing environment and techniques to resolve.

Books Recommended:

1. Frank Adelstein, Sandeep K. Gupta, Golden G. Richard, Loren Schwiebert, Fundamentals of Mobile and Pervasive Computing, McGraw-Hill Education (India), 2005.
2. Reading material from other online source