Elective II - 2.   PERVASIVE COMPUTING

Unit I:

Pervasive Computing: Past, Present and Future - Pervasive Computing Market – m-Business – Application examples: Retail, Airline check-in and booking – Health care – Car information system – E-mail access via WAP and voice.

Unit II:

Device Technology: Hardware – Human Machine Interfaces – Biometrics – Operating Systems – Java for Pervasive devices.

Unit III:

Device Connectivity: Protocols – Security – Device Management - Web Application Concepts: WWW architecture – Protocols – Transcoding - Client Authentication via Internet.

Unit IV:

WAP and Beyond: Components of the WAP architecture – WAP infrastructure – WAP security issues – WML – WAP push – Products – i-Mode - Voice Technology: Basics of Speech recognition- Voice Standards – Speech applications – Speech and Pervasive Computing.

Unit V:

PDA: Device Categories – PDA operation Systems – Device Characteristics – Software Components - Standards – Mobile Applications - PDA Browsers - Pervasive Web Application architecture: Background – Development of Pervasive Computing web applications - Pervasive application architecture.

Text Book:

Pervasive Computing, Technology and Architecture of Mobile Internet Applications, Jochen Burkhardt, Horst Henn, Stefan Hepper, Thomas Schaech & Klaus Rindtorff, Pearson Education, 2006.

Reference Book:

Fundamentals of Mobile and Pervasive Computing, Frank Adelstein, Sandeep KS Gupta, Golden Richard III, Loren Schwiebert, McGraw Hill edition, 2006.