35262 – MOBILE COMPUTING

DETAILED SYLLABUS

UNIT -I Introduction to Mobile Computing , WiFi , Bluetooth

1.1 Introduction : Evolution of Mobile Computing – Important terminologies – Mobile computing functions – Mobile computing Devices – Networks: Wired , Wireless , Adhoc - Comparison of wired and wireless mechanism - Various types of wireless communication technologies used in Mobiles, Antennas

1.2 Architecture : Architecture of Mobile Computing – 3- Tier Architecture – Presentation(Tier-1), Application (Tier -2), Data (Tier – 3)

1.3 Mobile computing through Telephony: Evolution through telephony 1 Hrs

1.4 Wireless LAN: Introduction - Applications of WLAN – Infrared versus Radio transmission – Features of WI-FI and WI-MAX – Bluetooth : Introduction and application

UNIT-II Introduction to GSM , SMS ,GPRS , Mobile OS

2.1 Global System for Mobile Communication (GSM): Introduction – GSM Architecture – GSM Entities (Basics only) – Introduction to CDMA

2.2 Short Message Service (SMS): Mobile computing over SMS – Short Message Service – Strength of SMS – SMS Architecture – Value added services through SMS – VAS Examples

2.3 General Packet Radio Service (GPRS): Introduction – GPRS Packet data Network : Applications for GPRS : Generic Applications, GPRS Specific Applications – Limitations of GPRS – Features of 3G and 4G Data Service

2.4 Mobile Operating Systems : Evaluation of Mobile Operating System-Handset Manufactures and their Mobile OS- Mobile OS and their features. Linux Kernel based Mobile OSr

UNIT-III Introduction to ANDROID

3.1 ANDROID : Android Versions – Features of Android – Architecture of Android – Android Market – Android Runtime (Dalvik Virtual Machine)

3.2 ANDROID SDK & ADT : Android SDK – Android Development Tool (ADT) – Installing and configuring Android – Android Virtual Device (AVD)

3.3 ACTIVITIES & INTENTS : Understanding Activites – Linking activities and indents – Calling built-in applications using intents – Fragments Displaying Notifications

3.4 User Interface : Views and Viewgroups – Layouts – Display Orientation – Action Bar – Listening for UI Notifications

UNIT-IV VIEWs

4.1 Basic Views : Textview, Button, Image Button, EditText, CheckBox, ToggleButton, RadioButton and RadioGroup Views, ProgressBar View, Auto Complete Text View

4.2 Advanced Views : Time Picker View and Date Picker View – List Views – Image View – Menus – Analog and Digital View – Dialog Boxes

4.3 Displaying Pictures & Menus with Views: Image View – Gallery View – ImageSwitcher – GridView - Creating the Helper Methods – Options Menu – Context Menu

4.4 SMS, Phone: Sending SMS – Receiving SMS – Making phone call

UNIT V Location Based Service and SQLite

5.1 Location Based Services : Obtaining the Maps API Key- Displaying the Map – Zoom Control – Navigating to a specific location – Adding Marker – Geo Coding and reverse Geo coding

5.2 Content Provider : Sharing data – view contacts – Add contacts – Modify contacts – Delete Contacts

5.3 Storage : Store and Retire data's in Internal and External Storage – SQLite – Creating and using databases

5.4 Android Service : Consuming Web service using HTTP , downloading binary Data – Downloading Text Content – Accessing Web Service

TEXT BOOK

1. Beginning Android 4 Application Development Wei-Meng Lee Wiley India Edition Curriculum Development Centre,

2. Android Apps for Absolute Beginners Jackson Apress

3 Mobile Computing Computing Asoke K Talukder, Hasan Ahmed, Roopa R Yavagal TMGH