***Course: 305-02: Mobile Application Development - 1***

*Unit-1: Concepts of Mobile computing.*

*1.1 Fundamentals of Mobile computing:*

*1.1.1 Concepts of fixed and wireless network*

*1.1.2 Introduction of Multiplexing, Modulation*

*1.1.3 Fundamentals of spectrum, Bluetooth technology*

*1.1.4 Concepts of Wireless Application Protocol(WAP)*

*1.1.5 Concepts of Mobile Agents.*

*1.2 Introduction of Android*

*1.2.1 History, concepts and Features of Android*

*1.2.2 Concepts of API framework*

*1.3 Intro. of Android Architecture ( Software Stack)*

*1.3.1 kernel Native Libraries*

*1.3.2 Concepts of Native Libraries and Android Runtime(Dalvik VM)*

*1.3.3 Application Framework*

*1.3.4 Application*

*Unit-2: Setting up Android Environment:*

*2.1 Android Emulator*

*2.1.1 Setting up JDK and Android Studio*

*2.1.2 Android SDK manager*

*2.2 Creating Android Virtual Device (AVD)*

*2.3 Creating first App:*

*2.3.1 Activity*

*2.3.2 Layout*

*Unit-3: XML (Extensible Markup Language)*

*3.1 Characteristic and Use of XML*

*3.2 XML syntax (Declaration, Tags, elements)*

*3.3 root element, case sensitivity*

*3.4 XML document:*

*3.4.1 Document Prolog Section*

*3.4.2 Document element section*

*3.5 XML declaration and rules of declaration.*

*Unit-4:Creating basic App*

*4.1 Basic App using Android studio*

*4.1.1 Create new android project*

*4.1.2 Write message and run*

*4.1.3 Understanding different components.*

*4.2 Dalvik Virtual Machine (DVM)*

*4.3 Understanding AndroidManifest.xml*

*Unit-5: Android Widgets(UI):*

*5.1 Hiding Title bar*

*5.2 screen Orientation ( Portrait, Landscape)*

*5.3 Form Widget Palette*

*5.3.1 Placing text fields and Button*

*5.3.2 Button onClick event*

*5.4 Displaying Notification:*

*5.4.1 Toast Class*

*5.4.2 Displaying message on Toast*

*5.5 ToggleButton:*

*5.5.1 ToggleButton Attributes:(textOff, textOn)*

*5.5.2 Event methods : getTextOff(), getTextOn(), setChecked()*

*5.6 CheckBox:*

*5.6.1 Event methods: isChecked(), setChecked()*