

MOBILE APPLICATION DEVELOPMENT

14OE706/IT 01

B.Tech.,(Semester- VII)

Lectures	:	4 Periods/Week, Tutorial: 0	Continuous Assessment	:	40
Final Exam	:	3 Hours	Final Exam Marks	:	60

UNIT - I

(14 Periods)

Classes and Objects: Concepts, methods, constructors, usage of static, access control, this key word, overloading, parameter passing mechanisms, nested classes and inner classes.

Inheritance: Basic concepts, access specifiers, usage of super key word, method overriding, final methods and classes, abstract classes, Object class.

Packages & Interfaces: Creating a Package, setting CLASSPATH, Access control protection, importing packages, defining an interface, implementing interface, variables in interface and extending interfaces.

Strings & Threads: Exploring the String class, Creating Threads in Java.

I/O Streams & Collections: Streams, Byte streams, Character streams, File class, File streams, Collections: ArrayList, Hashtable, Dictionary, List.

Event Handling: Events, Event sources, Event classes, Event Listeners, Delegation event model, handling events, Adapter Classes, Anonymous Inner Classes.

UNIT - II

(14 Periods)

Introduction: What is Android?, Android Versions, features of Android, Android Architecture, exploring the Android Studio, Creating Basic Android Application, Anatomy of Android Application.

Activities & Fragments: Activity Life Cycle, Applying Styles & Themes to an Activity, Fragment Life Cycle, Specialized Fragments - ListFragment, DialogFragment & PreferenceFragment.

Android User Interface: Basic Views, Picker Views & List Views, ViewGroups, Layouts, ScrollView, Displaying Dialog Window & ProgressDialog, Displaying Notifications, Anchoring Views, Managing changes to Screen Orientation.

UNIT - III

(14 Periods)

Advanced Views: ImageView, GalleryView, GridView, ImageSwitcher, working with Menus & WebView.

Intents & Broadcast Receivers: Understanding the Intent object, Calling Built-In Application using Intents, Returning results from an Intent, Passing Data using an Intent object, using Intent Filters, using BroadcastReceivers.

Files, Saving State & Preferences: Working with Files; Saving & Restoring Activity Instance state using Lifecycle Handlers, Creating, Saving and Retrieving Shared Preferences.

Databases: SQLite, Content Values & Cursors, Working with SQLite databases.

UNIT - IV

(14 Periods)

Messaging & E-mail: Sending SMS using Intents & SMS Manager, Tracking & Conforming SMS Message Delivery, sending E-mail.

Content Providers: Native Android Content Providers, Reading Contact details using Content Providers.

Working in the Background: using AsyncTask for Creating & Running Asynchronous Tasks.

Maps, Geocoding and Location-Based Services: Using the Emulator with Location-Based Services, Selecting a Location Provider, Finding your Current Location, Using the Geocoder - Reverse Geocoding & Forward Geocoding, Creating Map based Activity & Mapping Current Location.

TEXT BOOKS:

1. Java - The Complete Reference, 9th edition, Herbert Schildt, Oracle Press. [for Unit-I]
2. Beginning Android Programming with Android Studio, J. F. DiMarzio, John Wiley & Sons Inc., 2017. [for Units II, III & IV]

REFERENCES:

1. Head First Android Development - A Brain Friendly Guide, Dawn Griffiths & David Griffiths, O' Reilly.
2. Introduction to Android Application Development - Developer's Library, Joseph Annuzzi, Jr. Lauren Darcey & Shane Conder, 5th ed., Addison-Wesley.