

Paper Code: BCADSE 5.4	Paper title: Elective-I: b. Android Programming	Teaching Hours – 5 hrs/week
Total Teaching Hours: 60 Hrs.	Marks: Th-80+IA-20	Credits: 4

UNIT - I

The First App, How Java and Android work together :The Android API ,Java is object-oriented What exactly is Android?, The development environment ,The JDK 7, Installing the JDK , Setting up Android Studio, What makes an Android app :Android resources, Creating the project, Deploying and testing the app, Deploying to an emulator, Deploying to a real Android device

12 Hrs

UNIT- II

Examining the log output ,Exploring the project assets and code, Examining the layout file, Modifying the UI, Java comments, Sending messages, Writing our first Java code, Writing our own Java methods. Exploring Android Studio: Parts of the UI, The project explorer, Transforming the editor into a design studio,E1 – the Preview toolbar, E2 – exploring the palette, E3 – the layout preview, E4 – the Component Tree, E5 – the Properties window, E6 – text and design view tabs, The project folder and file structure. Structure of a UI design: Configuring and using widgets ,Widget properties, RelativeLayout, Using LinearLayout.

12 Hrs

UNIT- III

Coding in Java – Variables, Decisions, and Loops: Types of variables, Primitive types , Reference types, Variable declaration, Variable initialization, Changing values in variables with operators, More operators, If they come over the bridge, shoot them, Else do this instead, Switching to make decisions, The Switch Demo app, Do while loops , For loops , Loops demo app, The method structure , Modifiers.

12 Hrs

UNIT- IV

Widget Mania: EditText ,ImageView , Radio button and group, A switch widget ,CheckBox ,WebView , Date & Time, Pre-Marshmallow permissions ,Marshmallow permissions. Handling large amount of data with arrays ,Arrays are objects ,A simple array example mini app ,Getting dynamic with arrays , A dynamic array example, ListView and BaseAdapter.

12 Hrs

UNIT-V

Android Intent and Persistence, Switching Activity, Passing data between activities, Persisting data with SharedPreferences , Designing cool animations in XML, Fading in and out,Movement ,Scaling or stretching,Controlling the duration, Rotating animations, Preparing to publish ,Creating an app icon, Preparing the required resources, Building the publishable APK file, Publishing the app

12 Hrs

Reference Books:

1. Android Programming for Beginners: 2015 Packt Publishing
2. Android Programming: The Big Nerd Ranch Guide (Big Nerd Ranch Guides) By: Bill Philips & Brian Hardy
3. Android Design Patterns: Interaction design solutions for developers by Greg Nudelman Android User Interface Design: Turning Ideas and Sketches into Beautifully Designed Apps By: Ian G. Clifton
4. Android Recipes: A Problem-Solution Approach By: Dave Smith & Jeff Friesen
5. Hello, Android: Introducing Google's Mobile Development Platform (Pragmatic Programmers) By: Ed Burnette