Total Marks:60

4*2=8

Section A: 2 Marks Each (Answer any 4 out of 6)

1. Briefly describe the evolution of mobile technologies.

- 2. What are the key components of an Android application?
- 3. How do you launch your first Android application in the IDE?
- 4. Define an Intent in Android and its primary use.
- 5. Explain the role of the Action Bar in an Android application.
- 6. What is the purpose of using fragments in Android?

Section B: 5 Marks Each (Answer any 4 out of 6) 4*5=20

- 1. Describe the steps involved in debugging an Android application.
- 2. How can you manage changes to screen orientation in an Android application?
- 3. Explain the process of creating and using an SQLite database in an Android application.
- 4. What are the benefits of using WebView in Android applications?
- 5. Outline the steps to save and load user preferences in Android.
- 6. Discuss the importance of using alternate resources in Android development.

Section C: 8 Marks Each (Answer any 4 out of 6) 4*8=32

- 1. Discuss the process of publishing an Android application to the Google Play Store.
- 2. Describe how to create a user interface programmatically in Android.
- 3. Explain the implementation of a content provider in Android and its uses.
- 4. How can you consume JSON services in an Android application? Provide an example.
- 5. Illustrate the steps involved in accessing the SD card for reading and writing local data.
- 6. Explain the concept of binding activities to services in Android and its significance.

Total Marks:60

4*2=8

Section A: 2 Marks Each (Answer any 4 out of 6)

- 1. Name two key mobile application services in Android.
- 2. What is the purpose of an Intent object in Android?
- 3. List two tools required for Android development.
- 4. What is an Activity in Android?
- 5. Mention two types of views used in Android user interfaces.
- 6. What is SQLite used for in Android?

Section B: 5 Marks Each (Answer any 4 out of 6) 4*5=20

- 1. Describe the process of adapting an application to display orientation changes.
- 2. Explain how to use the Intent object to invoke built-in applications.
- 3. How can you create a ListView to display long lists in an Android application?
- 4. Discuss the process of sending an SMS message in Android.
- 5. Outline the steps to create a custom content provider in Android.
- 6. What are the key considerations for deploying APK files to the Google Play Store?

Section C: 8 Marks Each (Answer any 4 out of 6) 4*8=32

- 1. Explain how to use fragments in Android and provide an example of their usage.
- 2. Discuss the steps involved in persisting data to files in an Android application.
- 3. Describe how to display maps and obtain location data in Android.
- 4. Explain the process of creating a user interface using alternate resources and applying themes.
- 5. How do you implement debugging using log messages and the debugger in Android?
- 6. Discuss the implementation and usage of threading in Android applications.

Total Marks:60

4*2=8

Section A: 2 Marks Each (Answer any 4 out of 6)

1. What is the Android Manifest file used for?

2. List two methods for debugging an Android application.

3. Name two basic views in Android.

4. What is a Fragment in Android?

5. Mention two ways to manage screen orientation changes.

6. What file format is used for Android app deployment?

Section B: 5 Marks Each (Answer any 4 out of 6) 4*5=20

- 1. Describe the steps involved in creating an Android project in the IDE.
- 2. Explain the use of Intents for inter-component communication in Android.
- 3. How can you programmatically create a user interface in an Android application?
- 4. Discuss the role and usage of the Action Bar in Android applications.
- 5. Outline the process for persisting user data using Shared Preferences.
- 6. What are the steps to implement an about box in an Android application?

Section C: 8 Marks Each (Answer any 4 out of 6) 4*8=32

1. Explain the process of creating and using an SQLite database in an Android application.

2. Describe how to use specialized fragments and their benefits in Android development.

3. Discuss the implementation of SMS messaging in Android, including sending and receiving messages.

4. Explain how to consume web services using HTTP and JSON in Android applications.

5. Describe the steps involved in creating and publishing a content provider in Android.

6. Discuss how to handle local data access, including internal file system and SD card access, in an Android application.

Total Marks:60

4*2=8

Section A: 2 Marks Each (Answer any 4 out of 6)

1. What is an Activity lifecycle in Android?

2. List two advantages of using Fragments in Android.

- 3. Name two essential tools for Android development.
- 4. What is the function of a Content Provider in Android?
- 5. Mention two types of Intents in Android.
- 6. What is the purpose of the AndroidManifest.xml file?

Section B: 5 Marks Each (Answer any 4 out of 6) 4*5=20

1. Explain the role of the IDE in Android development and name two popular IDEs.

2. Describe how to handle screen orientation changes in an Android application.

- 3. How do you create and manage an SQLite database in Android?
- 4. Discuss the steps to send an email programmatically in Android.
- 5. Outline the process for creating a user interface using XML layouts in Android.

6. What are the key steps involved in publishing an Android application on the Google Play Store?

Section C: 8 Marks Each (Answer any 4 out of 6) 4*8=32

1. Explain the process of consuming JSON web services in an Android application with an example.

2. Describe the implementation and usage of a custom Content Provider in Android.

3. Discuss the steps to design a user

interface programmatically in Android and the advantages of this approach.

4. Explain how to use the Intent object to invoke built-in applications and provide an example.

5. How do you implement threading in Android, and why is it important for performance?

6. Discuss the methods for reading and writing local data in Android, including the use of internal file systems and SD cards.

4*2=8

Section A: 2 Marks Each (Answer any 4 out of 6)

- What is the purpose of an Intent in Android?
 List two benefits of using SQLite in Android.
- 3. Name two types of layout managers in Android.
- 4. What is a Service in Android?
- 5. Mention two types of data storage methods in Android.
- 6. What is the function of the Gradle build system in Android?

Section B: 5 Marks Each (Answer any 4 out of 6) 4*5=20

- 1. Explain the process of handling user inputs in an Android application.
- 2. How do you manage different screen sizes and densities in Android?
- 3. Describe the steps to implement a Recycler View in Android.
- 4. Outline the process for using Shared Preferences to save simple application data.
- 5. Discuss how to debug an Android application using Android Studio.
- 6. What are the main considerations for securing data storage in Android applications?

Section C: 8 Marks Each (Answer any 4 out of 6) 4*8=32

1. Explain how to create and manage a custom Content Provider in Android, including an example.

- 2. Discuss the steps involved in integrating Google Maps into an Android application.
- 3. Describe the implementation of a background service in Android and its use cases.
- 4. Explain how to consume RESTful web services in Android using Retrofit.
- 5. How do you implement data binding in Android, and what are its advantages?

6. Discuss the process of preparing and publishing an Android application, including signing the APK and uploading it to the Google Play Store.