



End Term (Even) Semester Examination May-June 2025

Roll no.....

Name of the Program and semester: B.Tech.(CSE-VIII Sem.)

Name of the Course: Mobile Applications Development

Course Code: TCS-822

Time: 3 hour

Maximum Marks: 100

Note:

- (i) All the questions are compulsory.
- (ii) Answer any two sub questions from a, b and c in each main question.
- (iii) Total marks for each question is 20 (twenty).
- (iv) Each sub-question carries 10 marks.

Q1.

(2X10=20 Marks)

- a. What are the primary components of an Android application? Explain the roles of Activity, Service, Broadcast Receiver, and Content Provider with examples. (CO-2)
- b. What is an Android Virtual Device (AVD)? Explain its significance and the process of creating an AVD in Android Studio. (CO-2)
- c. Explain the directory structure of an Android application. What is the purpose of each major folder and file? (CO-2)

Q2.

(2X10=20 Marks)

- a. What are Intents in Android? Differentiate between Explicit and Implicit Intents with suitable examples. (CO-3)
- b. What is an Adapter in Android? Explain its role in managing data and binding it to UI components. (CO-2)
- c. What is Gesture Detection in Android? How can you implement Swipe, Double Tap, and Pinch Zoom gestures using GestureDetector? (CO-3)

Q3.

(2X10=20 Marks)

- a. Describe the Android animation framework. Compare property animations, view animations, and drawable animations with suitable examples. (CO-3)
- b. Describe the different data storage options available in Android. Compare Shared Preferences, Internal Storage, External Storage, SQLite, and Network Storage based on use case and security. (CO-3)
- c. What is RecyclerView in Android? Explain how it improves upon ListView and the role of the ViewHolder pattern. (CO-3)

Q4.

(2X10=20 Marks)

- a. Describe the lifecycle methods of an AsyncTask, including onPreExecute(), doInBackground(), onProgressUpdate(), and onPostExecute(). How are these methods executed and in which thread? (CO-3)
- b. What are Location-based services (LBS) in Android? Discuss the APIs provided by Android for implementing LBS in applications. (CO-2)
- c. Describe the Android testing architecture. What are the different types of tests supported (unit tests, instrumentation tests, UI tests)? (CO-2)



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Q5.

(2X10=20 Marks)

- a. What are the steps involved in preparing an Android application for release? Explain the differences between a debug build and a release build, and why release builds are necessary. (CO-2)
- b. Explain the step-by-step process of publishing an Android application on the Google Play Store. Include details on creating a developer account, preparing a store listing, and uploading the app. (CO-2)
- c. Discuss how to monitor and respond to user feedback and crash reports using tools like Google Play Console, Firebase Crashlytics, and Google Analytics for Firebase after publishing an app. (CO-2)