

Instructions to the Students:

1. All the questions are compulsory.
2. The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in () in front of the question.
3. Use of non-programmable scientific calculators is allowed.
4. Assume suitable data wherever necessary and mention it clearly.

	(Level)	Marks
Q.1 Solve Any Two of the following.		12
A) Describe components included in the Android SDK to facilitate app development?	Level 2	6
B) What is the purpose of the application framework layer in Android?	Level 1	6
C) What is the Android Virtual Device (AVD) and how is it used in testing?	Level 4	6
Q.2 Solve Any Two of the following.		12
A) What are the key methods in the Activity life cycle and their roles?	Level 4	6
B) Compare different types of layouts available in Android.	Level 4	6
C) Describe the process of integrating fragments into an Android application.	Level 3	6
Q.3 Solve Any Two of the following.		12
A) Describe the difference between explicit and implicit intents with examples of each.	Level 1	6
B) How can you save application data in external and internal memory in Android?	Level 5	6
C) Describe types of dialogs available in Android, and when should each be used?	Level 4	6
Q.4 Solve Any Two of the following.		12
A) How SQLiteOpenHelper class help in creating and managing an SQLite database?	Level 1	6
B) Describe how to perform insert, update, and delete operations in SQLite database.	Level 2	6
C) What is Firebase, and what are its main features for Android development?	Level 3	6
Q.5 Solve Any Two of the following.		12
A) Describe how to monitor incoming and outgoing calls in an Android application.	Level 2	6
B) How to customize the appearance of a Google Map in an Android application?	Level 3	6
C) Describe how to enable or disable Wi-Fi programmatically in an Android application.	Level 2	6