

CDOE
BACHELOR OF TECHNOLOGY (CBCS - 2023)
B. Tech. Sem-V IT : WINTER: 2025
SUBJECT: MOBILE APPLICATION DEVELOPMENT

Day : Tuesday
Date : 16/12/2025

W-30777-2025

Time : 02:30 PM-05:30 PM
Max. Marks : 60

NB :

1. All questions are COMPULSORY.
2. Figures to the right indicate full marks.
3. Draw neat labeled diagram wherever necessary.

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|-----------|--|--------------|
| Q. 1 | Compare Android, iOS, and Windows OS kernel architectures and evaluate their performance and security implications. | CO1 BT4 (10) |
| OR | | |
| Q. 1 | Explain the Mobile Application Development Life Cycle (MADLC) and discuss the interaction between front-end and back-end services. | CO1 BT2 (10) |
| Q. 2 | Describe Android application components and explain the role of permissions in the Android Security Model. | CO2 BT1 (10) |
| OR | | |
| Q. 2 | Design the work-flow of an Android project using custom permissions and externalized resources. | CO2 BT6 (10) |
| Q. 3 | Illustrate the differences among major Android layouts and justify their use in adaptive UI design. | CO3 BT2 (10) |
| OR | | |
| Q. 3 | Analyze the Fragment lifecycle and discuss how Jetpack Compose changes UI development. | CO3 BT4 (10) |
| Q. 4 | Explain SQLite CRUD operations and compare SQLite with Firebase Firestore in real-time data handling. | CO4 BT2 (10) |
| OR | | |
| Q. 4 | Design a cloud-integrated mobile app architecture using Firebase Authentication and Cloud Functions. | CO4 BT6 (10) |
| Q. 5 | Summarize the iOS application lifecycle and the role of storyboards in UI development. | CO5 BT2 (10) |
| OR | | |
| Q. 5 | Evaluate Core Data and SQLite as database systems in iOS development. | CO5 BT5 (10) |
| Q. 6 | Describe performance optimization techniques in mobile apps, including profiling and memory management. | CO6 BT1 (10) |
| OR | | |
| Q. 6 | Discuss the complete publishing process of a mobile app with a case study of traffic management. | CO6 BT2 (10) |

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