

Roll No.

Total Pages : 03

CMCS/M-24

24540

MOBILE APPLICATION DEVELOPMENT

MS-20-41

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. Q. No. **1** is compulsory. All questions carry equal marks.

1. (a) Write down the characteristics of mobile applications.
- (b) How does the table layout differ from other layout types in Android ?
- (c) Briefly explain the role of sensors in Android devices.
- (d) Describe the concept of gradients in Android graphics and their application.
- (e) Differentiate Map view and Map activity.

Unit I

2. (a) Explain the different application models in the context of mobile development. Compare and contrast native, web, and hybrid application models.

- (b) Define mobile applications and discuss their characteristics. How do mobile applications benefit users and businesses alike ?

- 3. Explain the architecture of the Android operating system, including the Android stack and its various layers. How does the Android architecture facilitate app development and execution ?

Unit II

- 4. (a) Describe the purpose of Radio Buttons and Toggle Buttons in Android UI design. Differentiate between these two types of UI components.
(b) Explain the concept of callbacks and overrides in Android application development.
- 5. Explain the concept of Intents in Android and how are they used to launch Activities. Discuss the difference between explicit and implicit Intents, providing examples of each.

Unit III

- 6. Explain, how are fragments added to activities in Android applications ? Discuss the different methods of adding fragments to an activity, such as statically or dynamically.
- 7. (a) Explain the concept of location-based services in mobile applications.

- (b) Explain how media playback and recording are implemented using Android's multimedia framework ?

Unit IV

- 8. (a) Describe the process of using Canvas drawing in Android applications.
(b) Describe SQLite database in Android development. Outline the steps involved in creating and opening a SQLite database.
- 9. Explain the concept of registering content providers in Android applications. Discuss the role of content providers in facilitating data sharing between different applications.