

Roll No.

Total Pages : 03

MTE/D-23

24079

**MOBILE APPLICATION AND SERVICES
MT-CSE-18-31(i)
(Non-CBCS)**

Time : Three Hours]

[Maximum Marks : 100]

Note : Attempt *Five* questions in all. Question Number **1** is compulsory. In addition to compulsory question, attempt *four* more questions, selecting *one* question from each Unit.

(Compulsory Question)

- 1.** (a) Differentiate between JVM and DVM.
(b) Define services in Android operating system.
(c) List the challenges of Android app development.
(d) Write down the limitation of GPS.
(e) Enlist the steps to publish the Android application.

5×4=20

Unit I

- 2.** Describe the work flow for application development. Explain the creation of Android Virtual Device (AVD) to run android program on emulator.

20

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3. (a) List all the Android App Components. Explain.
(b) Explain with a neat diagram model-view-presenter pattern. **20**

Unit II

4. (a) Design an Android application with use of Linear Layout and show the difference between ListView and Spinner.
(b) Define gradient drawable. What is the purpose of using it ? **20**
5. (a) Write an xml code to show gradients in an application.
(b) Define and List the characteristics of SQLite database. **20**

Unit III

6. (a) Give difference between AudioTrack and MediaPlayer with example.
(b) Explain life-cycle of android application. **20**
7. Write short notes on the following : **20**
(i) NFC
(ii) Client server applications
(iii) Location Based Services (LBS).

Unit IV

8. Describe in brief about iPhone platform and explain the interfaces of UI tool kit. **20**
9. Write short notes on the following : **20**
(i) event handling and graphics services
(ii) cross platform application development.