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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA
(An Autonomous Institute Affiliated to AKTU, Lucknow)

MCA Integrated

SEM: VIII - THEORY EXAMINATION (2025 - 2026)

Subject: Mobile Application Development

Time: 3 Hours

Max. Marks: 100

General Instructions:

IMP: Verify that you have received the question paper with the correct course, code, branch etc.

1. This Question paper comprises of **three Sections -A, B, & C**. It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.

2. Maximum marks for each question are indicated on right -hand side of each question.

3. Illustrate your answers with neat sketches wherever necessary.

4. Assume suitable data if necessary.

5. Preferably, write the answers in sequential order.

6. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

SECTION-A

20

1. Attempt all parts:-

- | | | |
|-------|--|---|
| (1.1) | Among the following identify the part of android application that Activity represents: (CO1, K1) | 1 |
| (a) | UI screen | |
| (b) | Service | |
| (c) | DB | |
| (d) | File | |
| (1.2) | The use of onDestroy() function is to: (CO1, K1) | 1 |
| (a) | Start the fragment lifecycle | |
| (b) | End the fragment lifecycle | |
| (c) | Pause the fragment lifecycle | |
| (d) | Resume the fragment lifecycle | |
| (1.3) | Identify the proper usecase of Logcat in android studio:(CO2,K1) | 1 |
| (a) | Debugging | |
| (b) | Design | |
| (c) | Storage | |
| (d) | UI | |
| (1.4) | ViewGroup is?(CO2,K1) | 1 |
| (a) | Container | |
| (b) | Text | |
| (c) | Button | |
| (d) | Image | |

- (1.5) Fragment fully destroyed? (CO3, K1) 1
- (a) onPause()
 - (b) onDestroy()
 - (c) onStart()
 - (d) onStop()
- (1.6) Fragment attached to activity? (CO3, K1) 1
- (a) onDetach()
 - (b) onPause()
 - (c) onDestroy()
 - (d) onAttach()
- (1.7) Identify the method that adds data to intent? (CO4, K1) 1
- (a) putExtra()
 - (b) getExtra()
 - (c) addExtra()
 - (d) setExtra()
- (1.8) Intent can carry? (CO4, K1) 1
- (a) Data
 - (b) Action
 - (c) Category
 - (d) All
- (1.9) Among the following identify the join that returns all rows?(CO5,K1) 1
- (a) INNER JOIN
 - (b) LEFT JOIN
 - (c) FULL JOIN
 - (d) RIGHT JOIN
- (1.10) Out of the following identify the keyword that removes duplicates?(CO5,K1) 1
- (a) UNIQUE
 - (b) DISTINCT
 - (c) REMOVE
 - (d) FILTER

2. Attempt all parts:-

- (2.1) Analyze the role of Activity in user interaction and mention any two layouts. (CO1, K4) 2
- (2.2) Explain the use of Gradle in Android Studio and mention its role in android application. (CO2,K2) 2
- (2.3) Give two differences between onPause() and onStop() functions in Fragment. (CO3, K3) 2
- (2.4) Explain the use Broadcast Receiver in android application and describe its lifecycle in Android Application.(CO4, K2) 2
- (2.5) Evaluate one advantage and one disadvantage of using SQLite in mobile applications. (CO5, K5) 2

SECTION-B

30

Answer any one of the following:-

- (3.1) Illustrate the process of installing and running applications in Android Studio along with the steps for creating an Android Virtual Device. (CO1, K3) 6
- (3.2) Analyze the features of Android OS that support multitasking and enhance application performance.(CO1, K4) 6

Answer any one of the following:-

- (3.3) Explain the structure and significance of the Android Manifest file in Android Application development and mention four use cases of androidManifest.xml.(CO2, K2) 6
- (3.4) Explain the use of Linear, Relative, Grid, and Table layouts for designing Android user interfaces.(CO2, K2) 6

Answer any one of the following:-

- (3.5) Explain the use of fragment transactions for adding, removing, and replacing fragments in Android Application.(CO3, K2) 6
- (3.6) Explain the role and importance of FragmentManager in managing fragments within an Android application.(CO3, K2) 6

Answer any one of the following:-

- (3.7) Explain the concept of Intent in Android applications, classify its types, and describe its role in communication between application components.(CO4,K2) 6
- (3.8) Differentiate between BroadcastReceiver and Services in Android Application in terms of functionality and usage. (CO4,K4) 6

Answer any one of the following:-

- (3.9) Analyze the role of SQLiteOpenHelper class in database management. (CO5, K4) 6
- (3.10) Apply CRUD operations (Create, Read, Update, Delete) in SQLite with example. (CO5, K3) 6

SECTION-C

50

4. Answer any one of the following:-

- (4.1) Analyze the concept of Activity in Android applications and discuss its role in application structure, user interaction, and lifecycle management.(CO1, K4) 10
- (4.2) Analyze the different Activity states in Android along with suitable examples to illustrate state transitions during application execution. (CO1, K4) 10

5. Answer any one of the following:-

- (5.1) Analyze the role of permissions in Android applications ,Explain any four components that are used in developing an interactive user interface. (CO2, K3) 10
- (5.2) Explain the concept of Android UI design and demonstrate the use of UI components in building a basic user interface.(CO2, K3) 10

6. Answer any one of the following:-

- (6.1) Explain five methods used for fragment communication and lifecycle management in Android applications. (CO3, K2) 10
- (6.2) Explain the behavior of Fragments during back stack operations in Android applications with suitable examples. (CO3, K2) 10

7. Answer any one of the following:-

- | | | |
|-------|--|----|
| (7.1) | Define Intent filters. Explain how they are configured in the AndroidManifest.xml file with a suitable example. (CO4,K2) | 10 |
| (7.2) | Differentiate between normal broadcasts and ordered broadcasts in Android, and explain their working mechanisms with suitable examples. (CO4,K4) | 10 |

8. Answer any one of the following:-

- | | | |
|-------|---|----|
| (8.1) | Analyze the role of SQLiteOpenHelper class in Android for database creation and data handling with suitable examples. (CO5, K4) | 10 |
| (8.2) | Differentiate between internal and external storage in Android and explain their usage, advantages, and limitations in application data management. (CO5, K4) | 10 |

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