NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech

SEM: IV - THEORY EXAMINATION (2023 - 2024)

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-a.   TDMA is a multiple access technique that has   (CO1)   1

    (a)   Different users in different time slots

    (b)   Each user is assigned unique frequency slots

    (c)   Each user is assigned a unique code sequence

    (d)   Each signal is modulated with frequency modulation technique

1-b.   The transmitter-receiver combination in the satellite is known as a --- (CO1)   1

    (a)   Relay

    (b)   Repeater

    (c)   Transponder

    (d)   Duplexer

1-c.   Android is based on which of the following language? (CO2)   1

    (a)   Java

    (b)   C

    (c)   C++

    (d)   None of the above

1-d.   On which of the following, developers can test the application, during developing   1

        the android applications? (CO2)

    (a)   Third-party emulators

    (b)   Emulator included in Android SDK

(c) Physical android phone

(d) All of the above

1-e. For using Google map which permission you will specify in the AndroidManifest.xml? (CO3)   1

(a) USEMAP

(b) USE_GOOGLE_MAP

(c) INTERNET

(d) None of the above.

1-f. WPA is a security mechanism in   (CO3)   1

(a) WiFi

(b) Cloud

(c) Bluetooth

(d) Ethernet

1-g. Among these four, which database is natively supported by android? (CO4)   1

(a) Oracle

(b) SQLite

(c) MYSQL

(d) MSSQL

1-h. SQLite dot commands and exception should not be terminated by?   (CO4)   1

(a) ;

(b) :

(c) ,

(d) .

1-i. Multitasking In IOS was introduced in which version   (CO5)   1

(a) IOS 2.0

(b) IOS 4.0

(c) IOS 6.0

(d) IOS 7.0

1-j. Name the programming language used to develop iOS Applications. (CO5)   1

(a) Swift and Objective C

(b) JAVA

(c) PHP

(d) None

2. Attempt all parts:-

2.a. Compare the performance of web application and mobile application. (CO1)   2

2.b. Name and briefly explain the mobile automation tools that are available in the market. (CO2)   2

2.c. List down the available types of view in Android. (CO3)   2

| 2.d. | State the differences between android and iOS with examples. (CO4) | 2 |
| 2.e. | Explain the concept of cross-platform support in iOS with example. (CO5) | 2 |

SECTION-B   30

3. Answer any <u>five</u> of the following:-

3-a.	Decode MOBILE. Name the processors used for mobile and handheld devices. (CO1)	6
3-b.	Design the Architecture of Android based native Mobile App. (CO1)	6
3-c.	Difference between Table Layout and Frame Layout with diagram. (CO2)	6
3-d.	Name different types of processors used in the phone. Illustrate any two processors with example. (CO2)	6
3-e.	How can you use Date picker option in android and write the code of it? (CO3)	6
3.f.	Using XML, create an android presentation logic for simple calculator application. (CO4)	6
3.g.	Comment on testing and publishing the iphone marketplace, Also discuss the salient features of app store. (CO5)	6

SECTION-C   50

4. Answer any <u>one</u> of the following:-

| 4-a. | Illustrate the real case scenarios where web application and mobile application are used in education sector. Give a sample code for both the applications in education domain. (CO1) | 10 |
| 4-b. | Design the architecture of a hybrid Mobile Apps. Illustrate with diagram and example. (CO1) | 10 |

5. Answer any <u>one</u> of the following:-

| 5-a. | Discuss the term android ecosystem? Explain its components. (CO2) | 10 |
| 5-b. | Explain android activity life cycle? Define with example code : Protocols, Activities, Services. (CO2) | 10 |

6. Answer any <u>one</u> of the following:-

| 6-a. | Discuss the concept of communication between sensor data and android application. Write a android code stating communication between android device and sensor. (CO3) | 10 |
| 6-b. | Briefly explain types of animations? Show with demo code interfacing of android animation. (CO3) | 10 |

7. Answer any <u>one</u> of the following:-

| 7-a. | Explain with diagram the mobile cloud computing architecture. (CO4) | 10 |
| 7-b. | Define the terms: Install time, normal, signature, runtime, and special android permissions. (CO4) | 10 |

8. Answer any <u>one</u> of the following:-

| 8-a. | Create an iOS application with UI components and write the procedure. (CO5) | 10 |
| 8-b. | Explain how to integrate calendar and address book with social media application | 10 |

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in iOS. (CO5)

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