Nirma University
Institute of Technology
Semester End Examination (IR), December 2023
B.Tech. in Computer Science & Engineering, Semester VII
2CSDE76 MOBILE OPERATING SYSTEMS

Roll /
Exam No. [   ]

Supervisor's Initial
With Date [۶۱۷۱ٮ]

Time: 3 Hours

Total Marks: 100

Instructions: 1. Attempt all questions.
2. Figures to right indicate full marks.
3. Draw neat sketches wherever necessary.
4. Assume suitable data wherever necessary and clearly indicate it.

SECTION – I

Q.1 Answer the following questions: [14]

A
CO2,BL5
Write the code snippet in Android to show the interaction between two different activities through the intents. Enter 5 integer numbers through user and send it from first activity to second activity, second activity will calculate minimum and maximum of those 5 numbers and send the result back to the first activity. [07]

B
CO 2,BL 4
Illustrate the lifecycle of Android Activity with necessary diagram. Also, explain the role of Manifest file with suitable example. [07]

Q.2 Do as directed: [16]

A
CO2,BL3
Discuss Android platform architecture with suitable diagram. Justify significance of Android runtime in architecture. [08]

B
CO4,BL5
Write the code snippet in Android for an application by using list view1 to list out some items on screen and by selecting any of the item, system should display complete information about that selected item in list view2 in the same screen. Also show addition and deletion of the items from the list view1. [08]

Q.3 Do as directed: [20]

A
CO4,BL3
Discuss any four mobile device security vulnerabilities and also, explain risk mitigation technique of it. [08]

B
CO5,BL5
Write the code snippet in swift language for iOS application to demonstrate the use of button and label. While tapping a button, appropriate message should be displayed in a label within a screen. [12]

OR

B
CO5,BL5
Write a code snippet in iOS to design the user registration form. This [12]

form should make use of minimum four different GUI components. Also, apply required validations.

SECTION-II

Q.4 **Answer the following questions:** [16]

A
CO5,BL3
Illustrate iOS architecture with suitable diagram. Also, explain the security features of iOS. [08]

OR

A
CO5,BL4
How does Xcode work when we build the iOS app project. Justify with suitable example. [08]

B
CO5,BL5
Illustrate instrumented test and local test for Android device. How user performs unit test in Android project in real time application development? [08]

Q.5 **Answer the following questions:** [16]

A
CO2,BL3
Write a code snippet in Android to design a camera application which demonstrate how to capture an image. [08]

B
CO4,BL4
What is Broadcast Receiver? Demonstrate the use of broadcast receiver with code snippet in android for both user generated as well as system generated broadcast events. [08]

Q.6 **Do as directed:** [18]

A
CO5,BL3
Discuss the functionality of DFWMAC-DCF with RTS/CTS extension using suitable diagram. [08]

B
CO5,BL3
Discuss the following issues in wireless network with suitable diagram. [06]
(i) Hidden and exposed terminals
(ii) Near and far terminals

C
CO1,BL3
Discuss security and other features of various operating systems like Linux, iOS, Palm OS and Widows. [04]

OR

C
CO1,BL3
Differentiate between for following task [04]

(i)services and activity

(ii) Infrastructure network and ad-hoc networks